

INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Gags of the Week
Advertisement of the Week
Help, Help!
North Remembering
Information, Please
Salesmen Beware!

Story of the Week

"Bet you a 100-to-1 neither of us will die in an atom-bomb war," argument-ended an optimist.

"Hmm. Excellent odds," paused a pessimist. "Why are you so sure of your grounds?"

"If I win, I'll collect. If I lose, you won't."

Gags of the Week

"Must I sell my government bonds," a Detroit wag is asking, "before I could work for General Motors?"

"This demand for two mail deliveries a day is mainly from the ages that are either sending away for free samples or expecting pension checks. The great group in between feels that it gets the bills frequently enough as it is."—H. WADE.

Women prefer men who have tender thoughts — especially legal tender.—KAY INGRAM.

Advertisement of the Week

Upon stopping for a cup of coffee late one night—driving from Chicago to Detroit on U. S. 112—this "card" in a roadside beanery stirred our curiosity:

Your Old Refrigerator Has a Huskier Cabinet Than the Newer Models Have It Hermetized Rates Reasonable
Ray C. Taylor
450 Oak Street, South Shore
Wampler Lake, Michigan
How you doing, Ray?

Help, Help!

Proposed revisions of the Federal tax laws to lessen the tax load on small business have been submitted to appropriate Congressional Committees by John E. Horne, Administrator of the Small Defense Plants Administration.

The tax changes proposed are in a report prepared for SDPA, together with suggestions for changes received from the nation's small businessmen. They have been transmitted to the Senate Finance Committee, the House Ways and Means Committee, the Senate and House Small Business Committees, and the Senate and House Banking and Currency Committees. It is hoped they will be of assistance in aiding Congress to give small business sufficient tax relief to enable them to retain earnings adequate for working capital and for necessary plant expansion and modernization, Mr. Horne said.

In his letter to the various Congressional Committees, Mr. Horne said that the present tax structure "seriously inhibits the ability of small business to obtain capital, to retain earnings, and to finance expansion and the acquisition of machinery and equipment replacement," and that if proper tax relief is given, small business will be able "to pay more taxes in the long run."

"These tax problems, together with the problem of 'double taxation' of corporate earnings, have appeared with such constancy that the conclusion is inescapable that they have vitally affected the means by which the productive capacity of small business firms can be most effectively utilized for national defense and essential civilian production," which it is the duty of this agency to ascertain and coordinate," the SDPA Administrator said.

Mr. Horne summarized the proposals contained in the report as follows:

Excess Profits Tax: In the event of its retention, increase the exemption to \$100,000. Revisions are also suggested in the credit on invested capital rate basis and on the industry rate of return for companies whose net income is "just over" the proposed exemption.

(Concluded on Page 12, Column 1)

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Union Official Tells Contractors How To Get More from Jobs

CHICAGO — A representative of the Pipefitters Union told members of the Refrigeration and Air Conditioning Contractors Association of Chicago here recently that they could get more work on each job by insisting that the right men do all the work on the various jobs that are the type of work that rightfully belongs to pipe fitters.

William Klicker of Local Union 597 addressed the Chicago contractors group at their invitation. In his talk, he brought up instances of sheet metal firms taking the installation of air conditioning units away from the air conditioning contractor, and he also cited instances of plumbers doing work that should rightfully be done by the pipe fitters.

Klicker also advocated that the air conditioning contractor make provision.

(Concluded on Page 4, Column 2)

Frigidaire Adds Range, Refrigerator Models to '53 Line

DAYTON—New refrigerator and electric range models have been added to Frigidaire's 1953 product lines, H. J. Miller, appliance sales manager, has announced.

Miller also announced the extension of the apartment house refrigerator line to five models, ranging in capacity from 4.4 to 8.3-cu. ft. models.

The new refrigerator models in the regular line are all "Standard" series models, equipped with full-width freezer compartments. New range models include a new deluxe 30-in. type, model RS-38; and a budget model in the 40-in. type, model RS-10.

Suggested retail prices on the new Frigidaire models are:

Refrigerators	
SS-86	\$269.95
SS-74	229.95
SS-72	209.95
Ranges	
RS-38	245.95
RS-10	189.95

New 7.4-cu. ft. Standard series model (SS-74) is 24½ in. wide, 34 in. high, and 28 in. deep, features the full-width freezer with frozen food storage capacity of nearly 27 lbs., and a full-width porcelain Hydrator which will hold about three fourths of a bushel of fresh fruits and vegetables.

The Hydrator is equipped with a

(Concluded on Page 29, Column 2)

William Mauer To Manage Sales for Schnacke, Inc.

EVANSVILLE, Ind. — William V. Mauer, formerly president of Mauer Electric Co., Liberty, N. Y., has been named sales manager of Schnacke, Inc.



W. V. Mauer

He will direct sales of Schnacke compressors and condensing units from 5-hp. to 60-hp., and 3-hp. and 5-hp. residential air conditioners, through 41 sales representatives direct to refrigeration and air conditioning contractors. Mauer has a wide background of application engineering and sales experience in the refrigeration, air conditioning, and electrical fields, and has won sales awards from Frigidaire, Servel, and York.

Find Reports on 1953 Appliance Sales Favorable

Home Freezer Is Big Sales Leader In Central Kansas

WICHITA, Kans.—The home freezer was the big sales leader in the central Kansas area in figures on January retail sales by dealers, collected by the Kansas Gas & Electric Co.

According to these figures, home freezer sales increased 160.3% in January, over the figure for the same month in 1952. Next biggest gain was recorded by water heaters, with an increase of 144.1% over the previous year.

Other gains recorded included dehumidifiers, 50%; automatic washers, 51.3%; clothes dryers, 19.6%; conventional washers, 16.8%; and electric ranges, 2.3%.

Refrigerator sales decreased 12.8% from January, 1952 sales; disposal units were down 6.1%; and ironers, 2.8%.

Utility officials declared that sales by reporting dealers on all items were about 33% above the same period last year, and major appliance sales in January were down only 8% from December, normally a high month because of gift shopping.

Sales of Electrical Appliances In Nashville Up over Jan. '52

NASHVILLE, Tenn. — Nashville dealers sold 1,080 major electric appliances in January, compared with 1,053 during the same month in 1952, it was announced by William D. Hall, sales promotion manager for Nashville Electric Service.

Refrigerator sales in January totaled 350 as compared to 345 in the same month a year ago. Home freezer sales were 30 and 29.

Thor Report Tells of Refrigerator Plans

CHICAGO—Thor Corp. is planning on bringing out a line of household refrigerators this year, according to a statement made in the annual report issued this month.

Until late last year Thor had confined its operations to the home laundry field. During the January home furnishings markets Thor showed a line of home freezers.

"In 1953, a line of refrigerators will be marketed as companion pieces to the freezers which are gaining sales momentum," the report states.

Last month Thor also acquired Leeson Steel Products, manufacturer of "Prestline" electric ranges. Plans are under way to market this "built-in" style electric range under the Thor label.

2 More Firms Enter Home Conditioning Field

Sterling Produces First Residential Cooling System

CHARLOTTE, N. C. — New entrant in the residential air conditioning field is Sterling Air Conditioning Corp. here, which is producing a line of 2-ton and 3-ton air conditioning units for complete residential comfort cooling applications.

For this year, at least, marketing

(Concluded on Page 4, Column 4)

Prices on Carrier '53 Window Units Stay at '52 Level

SYRACUSE, N. Y. — Suggested retail prices just announced for Carrier Corp.'s 1953 line of window-type room air conditioners are generally at the same level as 1952 prices, and in some cases even lower.

This holds true despite the fact that the 1953 models feature new installation versatility, and a number of extra performance features including two-step air cooling, dehumidifying, and filtering, states John M. Bickel, vice president in charge of Carrier's dealer sales division.

Prices have been reduced \$10 on the ½-hp. model, and on certain of the ¾-hp. models.

Suggested retail prices are: ¼-hp., \$239; ½-hp., \$319; ¾-hp., \$399; 1-hp., \$474. Models with thermostatic control are available in the ¾-hp. and 1-hp. sizes at a slight extra charge.

Production of room air conditioners for 1953 will be about twice Carrier's record 1952 output, Bickel said.

Sees 1 Out of 10 Cars with Cooling In Next 10 Years

DETROIT—"Barring all-out war or depression, we should expect, within five to 10 years, that one out of every 10 new cars sold will be equipped with a passenger compartment cooling system," predicted P. J. Kent, executive engineer of Chrysler Corp., at a symposium on car air conditioning held here during the national Passenger Car, Body, and Materials meeting of the Society of Automotive Engineers.

"And when production reaches that point," Kent was later asked, "what will air conditioning cost the car buyer?"

Prices will come down, according to Kent, but D. C. McCoy of Frigidaire, who also addressed the group, added these sobering thoughts (his own personal views, he emphasized): "I think the answer to the cost question is to consider the installed

(Concluded on Page 6, Column 1)

2 Low Priced G-E Refrigerators Will Have Deluxe Features

LOUISVILLE, Ky. — Two low-priced refrigerators with deluxe features have been added to General Electric Co.'s 1953 line of major appliances, it has been announced by W. M. Timmerman, general manager of the household refrigerator department.

"Only 2 ft. wide, the new refrigerators provide maximum capacity for apartment and limited-space installations and offer such features as

(Concluded on Page 4, Column 4)

York-Shipley Introduces Summer Cooling Unit

YORK, Pa.—Distribution of a summer air conditioning unit for home, office, and store cooling through York-Heat automatic heating dealers has been announced by York-Shipley, Inc., automatic heating manufacturer here.

The Shipley air conditioner will be

(Concluded on Page 4, Column 1)

Parts Price Rise Starts; No Action On Appliances

Copper Products Get Boost; Competition Seen Holding Down Unitary Equipment

Bulletin

WASHINGTON, D. C., March 12 —In a decontrol order issued late today, the OPS lifted price ceilings from a wide range of products, including commercial and industrial refrigeration and air conditioning equipment.

Ceilings were also taken off water heaters and food waste disposers, the only major appliances left under control.

Today's decontrol order left only a few categories of products under price control, among them being machine tools, certain specified metals, steel mill products, and sulphur chemical products.

DETROIT—Here's the picture on industry prices as of the moment:

... Refrigerator, freezer, room air conditioner, and major appliance prices have not been subject to any general increases, despite the fact that price ceilings have been lifted.

... Prices of many parts and components — particularly those using much copper or brass — have been increased or will be increased shortly.

... Commercial refrigeration and air conditioning equipment is still under price control, but even when controls are lifted (as they must be by April 30) there is not much probability of any great increase, most industry sources believe.

A check on household refrigerator and other appliance manufacturers seemed to indicate that there wasn't even much discussion of possible price increases taking place. However, as a representative of one manufacturer put it, "We are faced with the problem of no relaxation in the pressures of increased costs pushing prices up, and no relaxation of the competitive pressures tending to hold prices down."

Of significance is the fact that prices on Carrier Corp. room air conditioners, just announced, (see story elsewhere on this page) are at the same or lower level than 1952 prices.

In the parts and components field, prices on copper tubing, following the jump in raw copper prices following decontrol, have jumped as much as 8% in prices posted to refrigeration supplies wholesalers. And wholesalers have received notices that they can expect increases of 6% or more in prices of brass and copper fittings, line valves, refrigerant driers, and like products. Thus far, there doesn't seem to be any activity in the price structure on refrigerant and electrical control valves.

These increases may mean a raise of up to 20% in the retail price of parts sold as such to the ultimate consumer.

Decontrol of service prices hasn't seemed to develop any great rush for an increase in service charges (hourly rates). In the refrigeration and air conditioning field, this is the "off" season, and any substantial

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NEMA Fan Section Sponsors Display Contest with \$2,500 In Prizes for Dealers

NEW YORK CITY—Electric Fan Section of the National Electrical Manufacturers Association is sponsoring a whopping Electric Fan Window Display Contest among retailers, with \$2,500 in Defense Bond prizes to stimulate the widespread display of fans during the period of the contest, which begins May 1 and ends at midnight on June 1, 1953.

The contest is open to all retailers who sell electric fans.

PRIZES LISTED

Prizes are substantial. First prize is a \$1,000 Defense Bond. Second prize is a \$500 Defense Bond, and there will be 10 Honorable Mention prizes—each a \$100 Defense Bond.

Stanley M. Ford, chairman of the merchandising committee of the NEMA Electric Fan Section, and president, Chicago Electric Mfg. Co., says of this contest:

"Aggressive retailers are beginning to realize that in order to build volume electric fan business they must put some real selling effort behind this appliance. They're finding out that the way to do that is not to wait for hot weather, but to anticipate it.

"They're establishing their stores in advance as fan headquarters—through advertising, direct mail, campaigns, and by early window and in-store displays. They're training their salesmen to sell fans early—the proper type of fans for customers' needs—while there's still a good selection available. They're not selling just fans, but summer comfort for the whole family. They use motion,

wherever possible, in their displays. They use manufacturers' display and promotional material to best advantage.

"But most important of all—they put displays in early. Let's not forget last summer. Any dealer who will start working on it this spring can build himself an assured volume of electric fan business throughout the summer and not depend upon a heat wave to move his inventory."

In the Electric Fan Window Display Contest, everybody has a chance, because winners will not necessarily be chosen on the basis of the biggest displays, but rather the most ingenious and original. Therefore, the little store in a small town has just as much opportunity to win a prize as the biggest emporium in a metropolis.

CONTEST RULES

The requirements are simple. The window must feature electric fans exclusively, and the display must remain for at least a period of one week during the month of May.

A photograph or snapshot of the window must be sent to the Fan Window Display Contest, Electric Fan Section, National Electrical Manufacturers Association, 155 E. 44th St., New York 17, N. Y. On the back of each photograph or snapshot, the following information must be printed: Name of person installing display; name and address of the store; date and length of time the display was in window; type of store, and name of distributor or distributor salesman serving the retailer.

Lonerger Names Kline Engineering Vice Pres.

ALBION, Mich. — Elwood Kline was named vice president in charge of engineering by the board of directors of Lonergan Mfg. Co. here recently.

Kline came with the company as chief engineer when it acquired the Refrigeration Corp. of America in 1949.

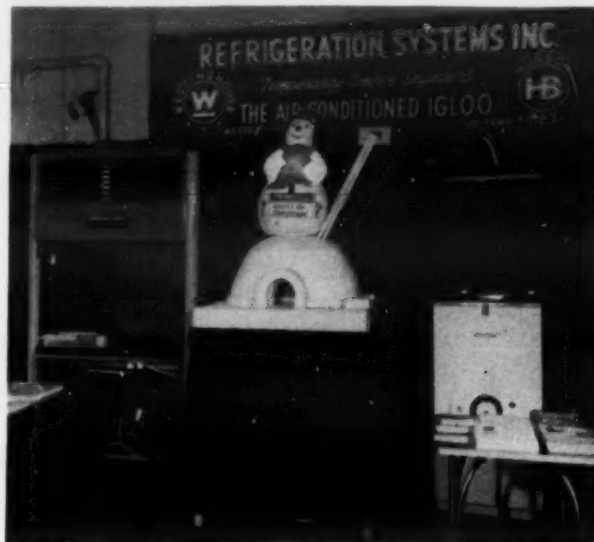
Other officers elected were: S. J. Lonergan, Sr., president and general manager; C. L. Targgart, executive vice president and treasurer; S. J. Lonergan, Jr., vice president in charge of sales; and Doren W. Russler, secretary and assistant treasurer.

George R. Prout, G-E Vice President, Dies

SCHENECTADY, N. Y.—George R. Prout, a vice president of the General Electric Co. and former manager of the G-E air conditioning division, died here March 8.

At the time of his death, Prout was vice president in charge of nucleonic and atomic projects, and was responsible for G-E's atomic energy activities.

Prout had been with G-E since 1923, and had been an executive in the motor and industrial controls departments before becoming manager of the air conditioning and commercial refrigeration division in 1944. He became general manager of the air conditioning department upon its organization in 1945 as one of six G-E operating departments, and was elected a vice president.



IT WAS COLD INSIDE—But how cold? Approximately 3,600 hands reached into this air conditioned igloo and came out with guesses ranging all the way down to -386° F. The correct guess was -74° F. Nine other visitors at the 1953 Products Show in Chicago guessed within two degrees of the correct temperature.

Novel Contest Asks Temperature Inside Igloo

CHICAGO — An "air conditioned Igloo," in which visitors put their hands and guessed at the temperature, was the novel display created for the recent 1953 Products Show at the Sherman hotel here, by Refrigeration Systems, Inc., temperature control engineers organization here which specializes in low temperature work.

More than 3,600 hands went into

the Igloo. The guesses ranged all the way down to -386° F. The correct guess was -74° F., and was made by J. W. Burns, Morrison Construction Co., Hammond, Ind. Nine other visitors won prizes for guessing within 2° of the correct temperature.

Some of the guess cards included such comments as "D— Cold"; "Colder than my Deepfreeze"; "As cold as my wife."

First RTA Convention Set for Washington, D.C. From March 20 to 23

WASHINGTON, D. C.—Based on the theme of "meet your government," the first convention of the Refrigeration Trade Association will be held at the Willard hotel here March 20 to 23.

This is a relatively new group of contractors and servicemen drawing its membership from the capital and the south Atlantic states.

The convention proper will run three days—from 1 p.m. Friday, March 20 through Sunday afternoon—and will be followed at 10 a.m. Monday, March 23, with a roundtable discussion of "Residential Air Conditioning—It's Effect on the Industry."

Provision for exhibits by manufacturers in the Presidential rooms of the hotel has also been made by the association.

Speakers from various branches of the government are to be featured at the open meetings scheduled for Saturday morning and afternoon and Sunday morning. To date, however, the names of only two speakers have been announced. William T. Smith of the Directorate of Installations, United States Air Force, will address the banquet Saturday evening, and Irving B. Hexter, the Sunday luncheon.

A business session is scheduled for Friday afternoon.

Buffet supper and informal get-together Friday evening and a dinner-dance with entertainment Saturday will round out the convention activities.

Detroit Construction Contract Resolution Slightly Revised

DETROIT—A proposed resolution pertaining to the letting of construction contracts by city departments and other offices has been slightly revised, John H. Witherpoon, city controller, announces.

Though the substance of the resolution remains the same, the structure and, in one point, emphasis has been changed.

As previously written, the resolution would require separate proposals on all construction or alterations projects exceeding \$100,000 for architectural trades, mechanical, electrical work, and elevators or other special equipment, unless not feasible and practical and in the best interest of the city.

As redrafted, "proposals for the construction or alteration of any building for the City of Detroit shall be on the basis of one general contractor for the entire work provided that these . . . are feasible and practical and in the best interest of the city . . ."

Later the resolution says that city departments, boards, or commissions, may receive separate proposals on the major sub-contracting work when the requirement for general contract bids is not feasible, practical, and in the interest of the city.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

LOOK 1 YEAR • 5 YEARS 10 YEARS AHEAD

—and you'll buy VICTOR today!



- Model VUQ-18
- 18 cu. ft. Upright
- The ultimate in Freezer compactness
- Many exclusive selling features



... Send for details of this Victor Upright

Quickfreezer and other items in the

Victor line that mean More Sales

... More Profitable Sales for You



VICTOR PRODUCTS CORPORATION
HARRISTOWN, MARYLAND
MANUFACTURERS OF THE FAMOUS VICTOR QUICKFREEZER



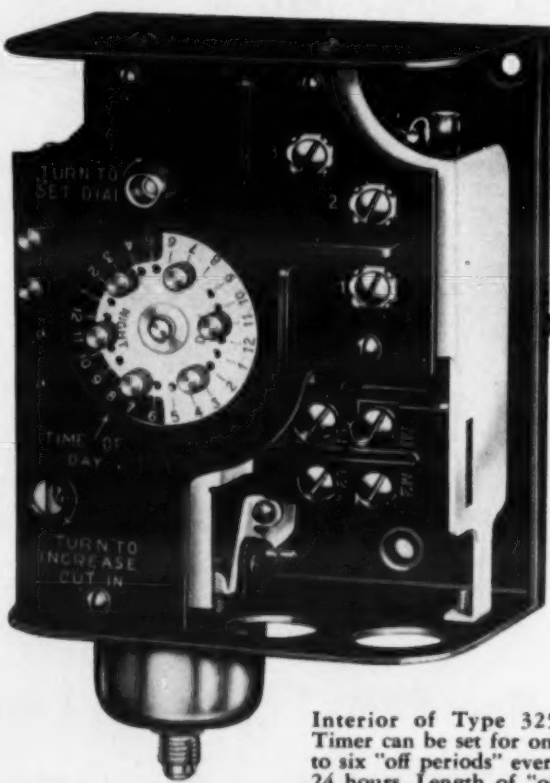
...the simple, correct way to

DEFROST AUTOMATICALLY

T-P . . . Time-Pressure defrosting . . . is the easy, economical fool-proof way to defrost coils in display cases, reach-in boxes and other refrigeration equipment maintaining temperatures from 24° to 35° F. and higher. Here's what it does . . .

It automatically and correctly varies the defrost period as required . . . eliminates annoying problem of determining length of shut-down time for proper defrosting under varying load and weather conditions. T-P avoids unnecessary shut-down time by stopping compressor only long enough to defrost . . . and does it automatically!

Learn more about the PENN Series 325 Time-Pressure Defrost Control. It's easy to sell. Ask your wholesaler or write Penn Controls, Inc., Goshen, Indiana. Export Division: 13 E. 40th Street, New York 16, N.Y., U.S.A. In Canada: Penn Controls Limited, Toronto, Ontario.

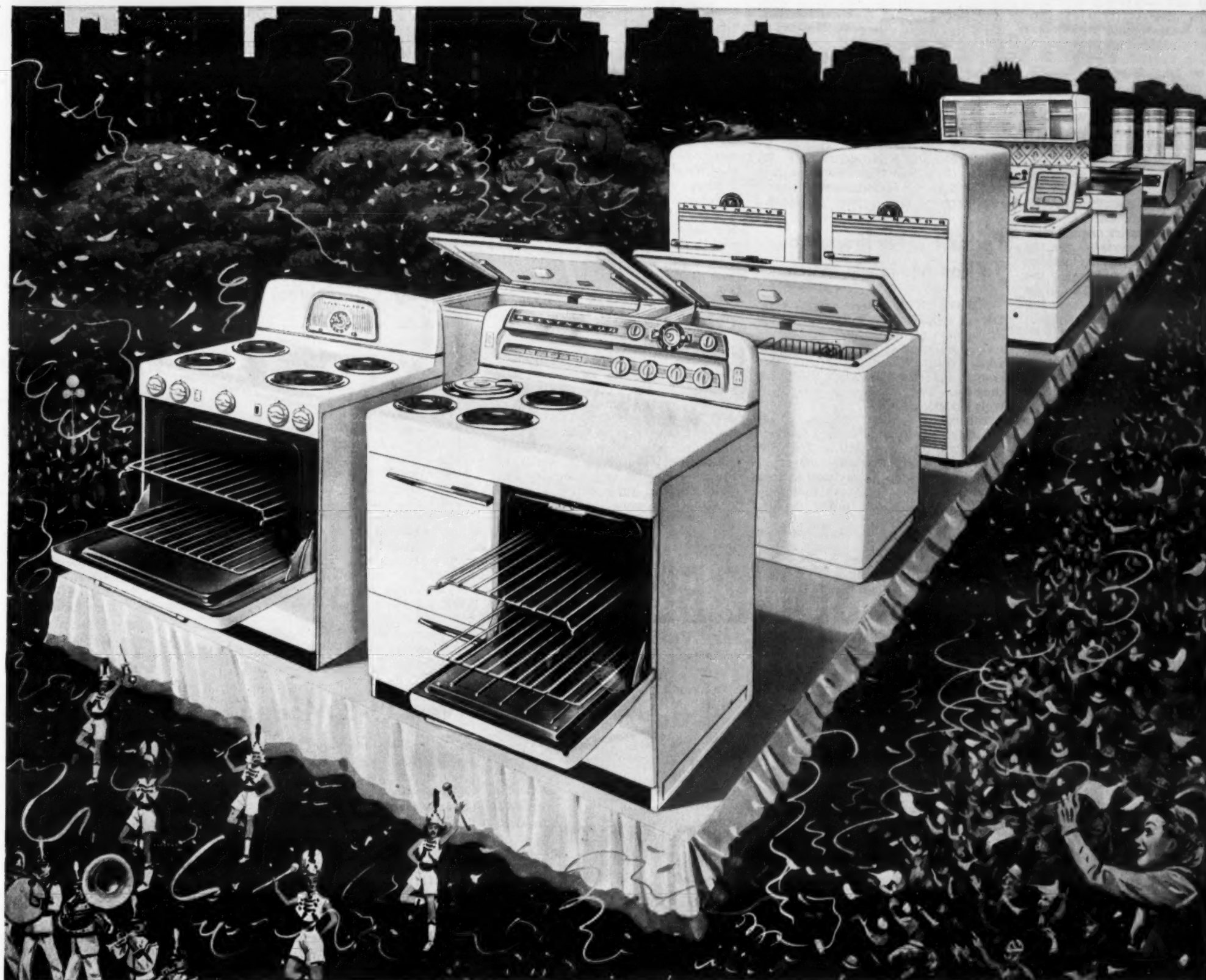


Interior of Type 325. Timer can be set for one to six "off periods" every 24 hours. Length of "off period" varies automatically with frost condition on the coil.

PENN

AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, GAS APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES



Kelvinator Electric Ranges Pass in Review!

HERE COME THE NEW 1953 KELVINATOR ELECTRIC RANGES! They're new. They're feature-filled. They're packed with selling points. And there's a Kelvinator top-value range for every pricing bracket.

With Kelvinator, you can offer prospects the very tops in quality, in high-styled beauty, in simplicity of line that means easier cleaning to the homemaker. And this year Kelvinator has brought out two sensational new 30-inch models that will ring the bell on the sales floor. Both of these compact Kelvinators, no wider than a card table, have the famed "Great Scot" oven and are sure sales makers.

Dealers have another winner with Kelvinator's two-oven model at a

one-oven price; and in Kelvinator's new, de luxe, top-of-the-line "Automatic Cook" ranges with features like "Picto-Heat" controls that tell not only which heat is on . . . but also whether inner or outer ring of surface elements is in use.

All of these new Kelvinator ranges are sure volume builders for retailers—and they represent just one of many sales opportunities offered by the greatly expanded Kelvinator line. Kelvinator now offers retailers one of the broadest lines in the industry with competitive prices and consumer acceptance. A Kelvinator franchise can mean real progress in the days that lie ahead.

JOIN THE **Kelvinator** PARADE TO BETTER BUSINESS!

Division of Nash-Kelvinator Corporation, Detroit 32, Michigan



REFRIGERATORS • RANGES • FREEZERS • HOME LAUNDRY EQUIPMENT • WATER HEATERS • DEHUMIDIFIERS • KITCHEN CABINETS • SINKS • "ELECTRO-DRAIN" GARBAGE DISPOSERS • ROOM AIR CONDITIONERS

York-Shipley Conditioner-- RACCA Meeting--

(Concluded from Page 1, Column 4) available in one size—3 hp.—and will be built in three sections so that it can be easily adapted to various types of cooling applications. All sections will be finished in white to match York-Heat's line of automatic heating equipment.

The base unit contains the cooling unit section. The complete air conditioner is hermetically sealed and mounted in a cabinet 24 in. wide by 22½ in. deep by 40½ in. high. Two 16 by 25 by 1-in. filters are located on the air intake side. The air passes over a 3-row aluminum fin cooling coil and is discharged through the top of the unit. Another feature of the unit is the cleanable water-cooled condenser.

For installations where a blower is required, a blower unit section is mounted on the cooling unit. The section is 15 in. high. The blower is rubbermounted for quiet operation.

The grille unit mounts on the blower section for ductless installations. It is 14 in. high and makes the complete unit 72 in. high. The grille is mounted at an angle, assuring maximum air distribution without drafts.

"The Shipley Air Conditioner is intended for home cooling applications in conjunction with a York-Heat winter air conditioner," C. H. Neiman, Jr., vice president in charge of engineering, said in announcing the new unit. "It can be tied into an existing warm air installation and the furnace blower used to circulate the air."

"In order to offer year-round air conditioning at the lowest possible price, we are offering only one size."

(Concluded from Page 1, Column 2) sions for handling the equipment the contractor installs, rather than subletting it to machinery movers.

At the meeting, new officers for the Chicago association were elected for the coming year. John Annis of Lipman Refrigeration Sales is the new president; Leon Epstein of Reliable Refrigeration & Air Conditioning Corp. is the vice president; W. L. Watson of Refrigeration Service Co. is secretary-treasurer. Directors are Frank L. Haas, Haskris Co.; William L. Long, Chicago Conditionaire Co.; Walter McCarty, McCarty Bros. Equipment Corp.; Earl A. McLean, Merchants Commercial Refrigeration Engineering Sales, Inc.; Harvey O. Miller, Murphy & Miller, Inc.; A. W. Theis, Theis and Theis Refrigeration Co., and Harry L. Bransky, Bransky Refrigeration Co., is past president.

Perfex Moves Production To Iron Mountain, Mich.

MILWAUKEE—The Controls Mfg. Div. of Perfex Corp. formerly located at its main plant, 500 West Oklahoma Ave., Milwaukee, began operation from Iron Mountain, Mich. this month, reports Allen G. Butler, vice president and manager of the controls division.

The controls sales, advertising, accounting, and engineering departments will remain in Milwaukee with the corporation's executive offices.

The manufacturing division at Iron Mountain will include the manufacturing, service, and order departments.

E. F. Timanus Heads New Baltimore RSES Chapter

BALTIMORE—First meeting of a new Baltimore chapter of the Refrigeration Service Engineers Society was held here last month, with 57 members in attendance.

The educational program for the meeting was presented by Allis Chalmers Co., in the form of a movie and discussion on water pumps.

Newly elected officers of the Baltimore chapter include E. F. Timanus, president; Charles J. Dorman, secretary; John Pundzak, treasurer; Frank Mackall, first vice president; M. Heishberger, second vice president; Walter Smith, education chairman; Herman Needel, membership chairman.

Next meeting of the Baltimore chapter will be held March 19, with Byron Halstead of Halstead & Mitchell speaking on maintenance and installation of condensers and cooling towers.

Charles Travis Dies Of Heart Attack

DOBBS FERRY, N. Y.—Charles F. Travis, commercial and parts sales manager in New York City for Kelvinator Div. of Nash-Kelvinator Corp., died early March 6 in Dobbs Ferry hospital of a heart attack. He was 59.

A native of New York, Travis joined Kelvinator Nov. 1, 1945, as a commercial sales representative after more than 25 years in the appliance field. He became commercial and parts sales manager Jan. 1, 1947.



STERLING Air Conditioning Corp.'s new residential air conditioning unit, which will be marketed in a limited area in the south and southeast.

Sterling Conditioner--

(Concluded from Page 1, Column 3) of the Sterling line will be confined to an area ranging from North Carolina westward to Oklahoma City, southward to Dallas, and eastward to Miami.

Production of the air conditioning units will be carried out at the Carolina Metal Products, Inc. plant here, under the direction of Ted Oldenburg, vice president and general manager of the metal products firm.

Sterling Air Conditioning Corp. also plans to distribute the same unit with a plenum chamber for store and office applications; and a window unit for single room conditioning.

Officers of Sterling Air Conditioning Corp. are Sam Stewart, president; Denton W. Cruse, secretary and treasurer; and L. G. Alexander, vice president. Jim Lucas is sales manager.

Frigidaire 'Yardstick' Measures National Advertising for Dealers

DAYTON—Busy appliance sales organizations frequently find it difficult to accurately gauge the impact of national advertising in local markets.

To help clarify this situation and provide a simple yardstick for measuring coverage of the Frigidaire national program at the local level, F. H. Peters, appliance advertising manager, developed a novel presentation for the company's national distributors' meeting recently by interpreting national advertising in terms of newspaper ad insertions.

Selecting Montgomery county, Ohio, as a typical marketing area, he revealed that Frigidaire's national advertising program will shower more than 5,894,000 appliance selling messages upon the 100,000 or so resident families during 1953. Using local Sunday newspaper circulation as a common denominator, Peters pointed out that this amount of advertising is equivalent in circulation to 55 Sunday newspaper insertions in the county.

The Montgomery county statistics were based on Frigidaire's 1953 national advertising circulation, which is described as the largest in company history.

All types of national advertising media were considered in preparing the Montgomery county example, using county circulation figures of national magazines and newspapers, together with the audiences for the area covered by Frigidaire's Arthur Godfrey television and radio shows.

Peters stressed the fact that the presentation was not designed to prove the superiority of one media over another.

"We simply used this method to give our organization a common yardstick for measuring national advertising coverage in a manner that is easy to understand," he explained. "When the average Frigidaire dealer runs an ad in his local newspaper, he usually knows the exact circulation, readership, and the results."

"But, these busy dealers do not have time to read all national magazines and newspapers that carry Frigidaire advertising that come into their areas; nor to view all television shows or listen to radio programs. Thus, it is difficult for them to visualize the circulation and coverage afforded by the national advertising activity in their marketing areas."

"While Montgomery county may not be typical of all counties," Peters added, "we do feel that it typifies the situation in most counties across the country."

New G-E Models--

(Concluded from Page 1, Column 4) door shelves, vegetable drawers, and full-width freezer compartments hitherto available only in higher-priced models," it was stated.

The "LC-70," automatic defrosting model with 7-cu. ft. capacity, carries a recommended national retail price of \$279.95. It will reach the market about the middle of April.

The "LB-76," a manual defrost model with 7.6-cu. ft. capacity, is a deluxe model of the LA-76 announced earlier. It carries a recommended national retail price of \$239.95 and will be available to the consumer about the end of May.

Though priced \$40 and \$70 below the 8.7-cu. ft. LC-87 and LD-87 respectively, the LC-70 shares with them such features as cold air circulation and a new system of defrosting, Timmerman pointed out.

SLOPING BAFFLE CIRCULATES COLD AIR

A sloping aluminum baffle, below the full-width evaporator, causes cold air to circulate down the back and around to the top of the cabinet. Termed the "Roto-Cold," this circulation of cold air provides a more even temperature distribution throughout the fresh food section.

A sealed heating unit, built into the across-the-top evaporator, is turned on automatically by a frost limiting device whenever defrosting is necessary. Called the "Frost Limitor," this device combines several factors affecting frost formation. Thus the refrigerator adjusts itself automatically to varying climates and usage. Water from defrosting is channeled into a glass receptacle at the right rear of the top shelf.

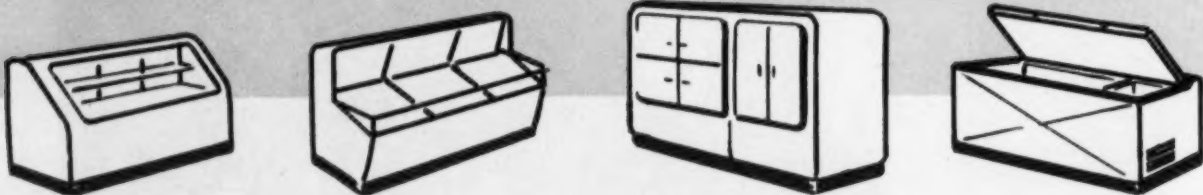
FREEZER HOLDS 22 LBS.

The full-width freezing compartments of both the LC-70 and the manual defrost LB-76 hold up to 22 lb. of frozen food.

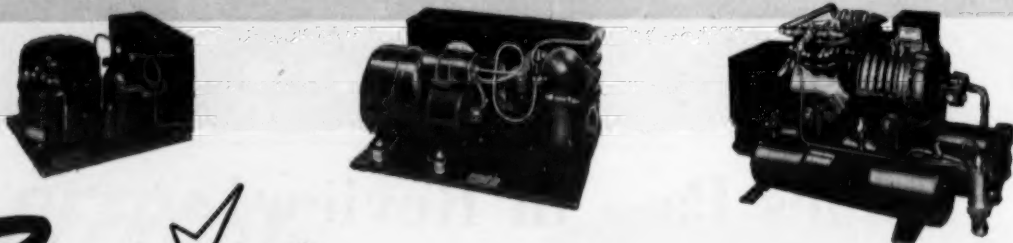
Other features of the new models are aluminum ice trays, rust-resistant anodized aluminum shelves, three door-shelves, full-width vegetable drawer, automatic interior light, and adjustable temperature control. The LB-76 also has a full-width chiller tray.

Both refrigerators carry a one-year guaranty on the sealed-in materials and an additional four-year warranty against defective refrigeration system.

GOOD FIXTURES SERVE BETTER



WHEN THEY'RE EQUIPPED WITH



Servel SUPERMETICS

The proved economy and outstanding performance record of Servel Supermetics plus the amazingly liberal factory warranty make an unbeatable combination.

The warranty plan gives 5 years' protection on sizes up through 1 HP—1 year on larger sizes. It relieves fixture manufacturers of all parts inventory and field replacement problems.

Customers are assured of protection and satisfaction. When need arises, customers deal quickly, conveniently through local sales-service outlets who get "over the counter" service from near-by Servel wholesalers. No delay. No red tape.

32 Servel Supermetic models for every commercial refrigeration need—¼ to 3 HP.

WORTH LOOKING INTO!



Write us today to acquaint yourself with the many ways that the combination of your fixture line and Servel Supermetic condensing units can benefit you. Servel, Inc., Electric Refrigeration Division, Evansville 20, Indiana.

THE NAME TO WATCH FOR GREAT ADVANCES IN REFRIGERATION AND AIR CONDITIONING



CORKBOARD

- Steam-Baked
- Price—20% Lower
- Fed. Specific. H. H.-C561B

WRITE FOR PRICES

SUPREME INSULATION INC.
55 W. 42nd St., New York 18, N. Y.
Telephone OXford 5-1474

FRIGIDAIRE ROOM AIR CONDITIONER SALES BACKED BY BIGGEST AD-PROMOTION BLITZ IN HISTORY



An avalanche of advertising is on its way! Through every proved advertising medium, customers and prospects throughout the country will be told a brand new story of Frigidaire Great Circle Cooling comfort. In magazines, newspapers, through the mail and

over the air, the powerful force of Frigidaire advertising will be focused on the Room Air Conditioner that offers buyers more per dollar in true, complete, never-fail hot weather comfort for volume sales and maximum dealer profits!

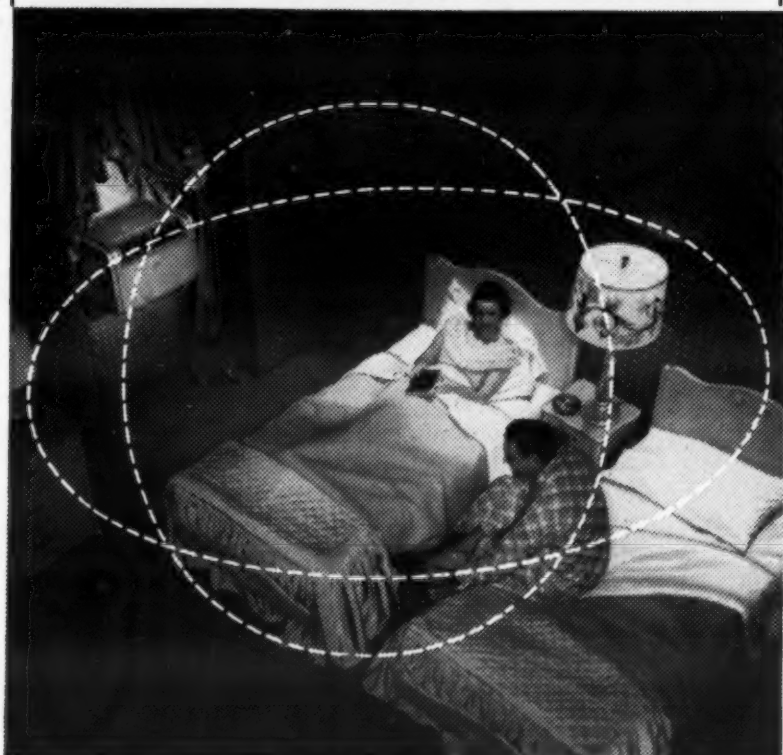
Hits hard and fast to guarantee continued leadership in booming market

A supercharged program of advertising and promotion is already in action to help Frigidaire Dealers capture Room Air Conditioner sales in 1953. Dramatic, power-packed, it tells the exclusive story of superior Frigidaire performance.

Frigidaire advertising "talks turkey" to the vast home market, to hotels and motels, to business and professional men, to all the thousands of potential buyers across the country. It reaches them through such outstanding magazines as Saturday Evening Post, Time, Newsweek, Better Homes and Gardens, Holiday and the important hotel and motel trade publications. And it's spearheaded with a huge factory-paid schedule in newspapers reaching all principal air conditioning markets.

To back up this advertising on a national scale, Frigidaire Dealers have a complete set of "power tools" for effective advertising and selling at the local level: direct mail, newspapers, ad mats, scripts and recorded commercials for TV and radio, billboards, car cards, point-of-sale displays, merchandising ideas, training schools and materials, color slide films, smash special promotions, all wrapped up in a plan book of "Big Time" selling activities. It's a profit package that's geared to today's market to continue the Frigidaire franchise as the most valuable in the country!

An exclusive story in GREAT CIRCLE COOLING



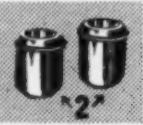
There's thrilling news in Frigidaire's exclusive up-and-around air circulation that can be tailored perfectly to individual rooms, for cooling, dehumidifying, filtering, circulation, ventilation, and stale air exhaust... the right way, the

healthful way! No more layers of stale, static air, no warm, moist "pockets," no hot and cold spots! Just corner to corner, complete room comfort that gently enfolds and surrounds you with crisp, dry, refreshing coolness!

Twin Meter-Miser Units offer new flexibility and new operating economy

The greatest guarantee of all-season comfort at money-saving prices ever offered... exclusive Frigidaire Selective Cooling! See how two Meter-

Miser cooling systems in one Room Air Conditioner give dealers a tremendous selling plus! Just one operates in moderate weather to provide complete cooling, dehumidifying and filtering at half the cost. Two Meter-Misers team up when temperatures soar to double cooling power.



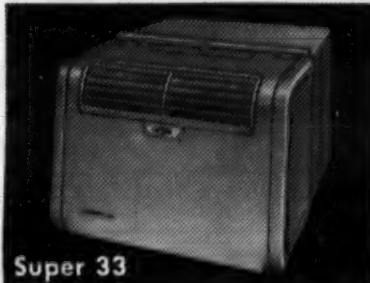
OUTSTANDING SELLING FEATURES

Compare feature by feature, inside and out, and you'll see why Frigidaire Room Air Conditioners are second to none! Powered by the famous Meter-Miser compressor, proved in millions of Frigidaire products. Warranted 5 years.

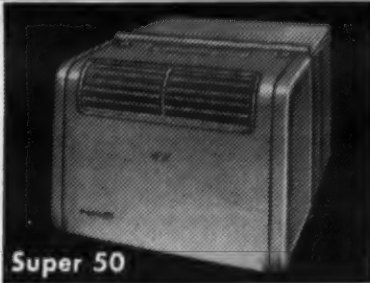
All-steel cabinets beautifully designed and finished, to harmonize in any room setting. Exclusive Quadra-flo air distribution for complete room conditioning without direct blasts of air.

The complete line for every room need... every budget!

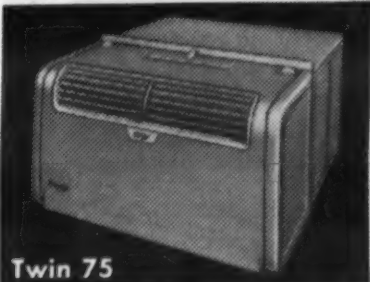
Everything that's necessary for every consumer demand and every selling need. A spectacular price leader in the Super 33 that offers true air conditioning without sacrificing quality in any way. The giant plus of the wonderful Frigidaire Twin Meter-Miser models. The chance to sell-up to the luxury and level comfort of Automatic Selective Cooling. "Twin 75A" and "Twin 100A" with thermostatic control for complete automatic operation spring to fall. Set it, forget it, for complete carefree comfort. Here is an unequalled combination of quality, price, features, and model selection.



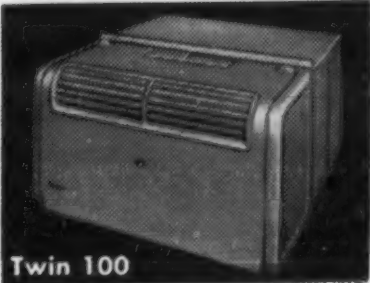
Super 33



Super 50



Twin 75



Twin 100

Frigidaire Room Air Conditioners



Frigidaire Division of General Motors, Dayton 1, Ohio

These features plus Frigidaire's matchless reputation for quality and dependability give Frigidaire Dealers important selling advantages.

'One Out of 10 Cars Will Be Air Conditioned'

(Concluded from Page 1)

cost of a 1-hp. window air conditioner. As near as my memory serves me, this is somewhere between \$400 and \$500. With the current automobile air conditioning system costing around \$800, I personally don't think there's much leeway."

In the formal session, McCoy gave a detailed description of the Frigidaire car cooling system, and H. V. Joyce of Ford Motor outlined production and service aspects of the problem from the auto manufacturer's viewpoint.

(Complete texts of the talks by Kent, McCoy, and Joyce will appear in future issues of AIR CONDITIONING & REFRIGERATION NEWS.)

Good Market Everywhere

In this talk, Kent said he saw a good market for car conditioning in "practically all parts of the United States" and the export business as well.

"Experience with residential room coolers should give a pretty good clue to where the market exists for car cooling systems, and it is no secret that the best market for room coolers is in the section near New York City."

Who Will Buy Air Conditioned Cars?

"What kind of people will want car cooling in their automobiles? Certainly many people in the hotter or warmer parts of the world," he commented. "Salesmen, doctors, or others who spend a good part of their daylight hours on the road and particularly where the cost can be charged off as a business expense."

"Anyone driving an automobile in the hot dry or warm humid parts of the world after once driving a cooled car will have the desire to own one. I believe there will be a good market from people who suffer from hay fever, asthma, and other respiratory diseases," Kent said.

(Commenting later, C. R. Payton of Willys-Overland, who's driven three prewar air conditioned Packards, recalled: "One of the early surprises was that air conditioning turned out to be a year-round device. I would often turn it on low in winter to keep out moisture, using the heater also. In addition we found that driv-

ing the car with the windows closed gave just half the fatigue. In other words, you can drive an air conditioned car twice as far in a day with no more fatigue than normal because there's no wind or noise to bother you.")

Tooling Cost Kept Down

Touching on the problems of tooling and tool amortization, Kent indicated that the conservative manufacturer will keep tooling to a minimum by buying parts on the outside which are already tooled, doing a certain amount of hand work rather than create expensive dies, and perhaps using more expensive materials that can be more economically fabricated in low production.

Regarding performance requirements, he said Chrysler had decided to specify a capacity of 1 1/4 tons at 25 miles per hour and 25% outside air.

"With the trend toward lower hoods there is a definite need for a smaller, light weight compressor which can be safely driven at higher speeds, preferably somewhere between the engine and generator speed. Some means of controlling the compressor speed independent of the engine speed would also be desirable."

The problem of reducing the car radiator's cooling capacity by placing the refrigeration condenser in front has been minimized by Chrysler, Kent explained. The condenser is split in two parts connected in series. About one-third is located in front of the radiator, the remaining section in the position of the normal radiator dust pan.

Basic Elements Present In Car as In Home

In presenting the paper on the Frigidaire system, which had been prepared with the assistance of M. W. Baker, McCoy pointed out that the basic elements of an air conditioning system are the same regardless of where it is used. He reviewed these eight elements: refrigerant, source of power, compressor, condenser, liquid refrigerant control, evaporator, fans and air distribution system, temperature, and miscellaneous controls.

Compressor used is the "Meter-Miser" with the usual enclosed elec-

tric motor eliminated and a shaft with seal and a pulley outside of the casing added, he explained.

"At 1,750 r.p.m., it develops approximately 17,500 B.t.u./hr. at 35 lb. suction pressure and 190 lb. head pressure, this condition being obtained at approximately 40 m.p.h. car speed with the motor-to-compressor pulley ratios used on current applications," McCoy said.

"Under the heading of 'Refrigerant Control' we have a new and unique feature in use on Frigidaire automobile air conditioning systems. This is a metering solenoid valve which is used to offset the variable speed of the compressor and resulting variable capacity. It also provides the means of shutting down the system when cooling is not required . . .

How Metering Solenoid Operates

"This valve is normally open and is controlled by the thermostat in the return air to the evaporator. When open, a mixture of liquid and gaseous refrigerant comes from the condenser through a tee and then through the solenoid instead of into the receiver. When return air temperature to the evaporator drops below a given point due to excess compressor capacity at high speed or low ambient, the thermostat opens the solenoid valve and bypasses refrigerant to the suction side of the compressor."

"When open, some liquid mixed with gas passes through the metering solenoid valve, evaporates and returns to the suction side of the compressor. The orifice in this valve," McCoy said, "is selected so that the small amount of liquid is gasified in passing through the valve and

thus returns to the compressor in the gaseous state."

"Pressure is maintained on the receiver by a check valve when the solenoid is open. When return air temperature rises, the thermostat closes the valve and allows full compressor capacity to be applied to the evaporator. The metering solenoid valve system gives equivalent results to controlling the compressor speed," he asserted.

Production, Service Aspects

The paper presented by Joyce devoted to "Production and Service Aspects of Automotive Air Conditioning," took up the installation problems faced by the automobile manufacturer.

"Consider final line installation, or what is commonly referred to as regular production order equipment. The customer would designate on his order blank this unit [air conditioning] as he would, for instance, an automatic transmission or other extra cost items available to him."

"This order, then, is final line scheduled. Build-up of the vehicle with its special motor mounts, springs, shock absorbers, tires, radiator, fan, horns, discharge grille or ducts, plus the actual air conditioning equipment as you have seen in the previous papers, is certainly going to require alertness on the part of final line personnel and supervision."

Tinted Glass, Type of Drive To Be Considered

"It will be necessary to consider type of drive, such as standard, overdrive, or automatic, with their various axle ratios to insure adequate compressor speed at 20 m.p.h. and

not to exceed maximum operating speed when car engine speed reaches its peak. To this end, combination compressor-to-crank drive ratios may be required to meet these conditions. Tinted glass may be specified, too, as mandatory by some manufacturers . . .

"At the moment, however, with anticipated new production aims, considerable thought has been given to a second possibility, off-line assembly," Joyce said. "Off-line, perhaps, might be in the final line garage or area where partially complete vehicles could be reworked."

"Under this method, final line flow would not be interrupted, and inasmuch as final line built vehicles would still require an area for refrigerant charging and adjustment, perhaps this method of installation would have greater possibilities."

Who Else Can Make Installation?

As for installations made by the automobile dealer, Joyce commented that "in large cities, perhaps a centrally located dealer might arrange to perform this service. Farming out to an established refrigeration company may also have possibilities. The latter may not be good practice, from both a service and warranty policy. The customer, in returning to a place other than his dealer's and finding the car must be tied up for service, is immediately confronted with his primary reason for purchasing a car—transportation . . .

"In general," he stated, "there appears to be a need at the moment of both final line and dealership installations to suit individual car manufacturers' facilities and future production plans."

MULTIPLE AIR IN UNIQUE RESEARCH

Typical of Extensive Market in This Field

tower building. It cools 840 gallons of water per minute from 55°F. to 45°F. This, in turn, cools nearly 75,000 cubic feet of air per minute, 23,000 cfm of which is used in the tower itself with the balance serving an Administration Building, Annex and Pilot Plant.

A separate 7 1/2-h.p. system provides air conditioning for the company cafeteria, and there is also a drinking-water cooling system with a 1-h.p. condensing unit. In addition, seven individual systems control conditions in as many different test rooms, where temperatures range from below zero to 140°F., and the percentage of humidity is varied in accordance with laboratory requirements. "Freon" refrigerants are utilized in all systems.

UNIQUE STRUCTURAL DESIGN

The 15-story, 154-foot tower, called the "Helio-lab," is built around and cantilevered from a concrete stack or shaft with five hollow risers (see sketch), a part of the basic plan. The central riser, forming the hollow core, carries around its perimeter the intake and exhaust pipes that service the entire building. A horizontal duct system in hollow reinforced-concrete floors is connected to the vertical hollow of the shaft.

Outside air enters the system through an electrostatic filter. It is dehumidified and cooled to 60°F. in summer, heated to 65°F. in winter. A fan at basement level discharges the air to a supply shaft in the central core. From the shaft, conditioned air enters the horizontal ducts and is discharged through 24 combination lighting and air-diffusion fixtures, each of which supplies 65 cfm controlled by thermostats on each floor.

The air is exhausted at the rate of 1300 cfm through two 14" by 14" grilles in risers at opposite sides of the stack. Because certain of the experiments conducted by chemists and engineers in the lab require fume hoods to vent contaminated air and noxious odors, pressures vary



View of fully air conditioned Johnson Wax Research Center in Racine, Wisconsin.

Project points up importance of including air conditioning in basic plans

When designing the recently completed research laboratories of S. C. Johnson & Son, Inc., wax manufacturers, Frank Lloyd Wright, internationally famed architect, included air conditioning systems as an integral part of the construction. Instead of requiring strong support, as is frequently the case, the design of the several systems actually lends strength to the structure.

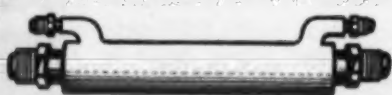
10 SYSTEMS MEET VARIED NEEDS

The main installation consists of a 375-ton York Turbo Water Cooling System erected in the basement of the

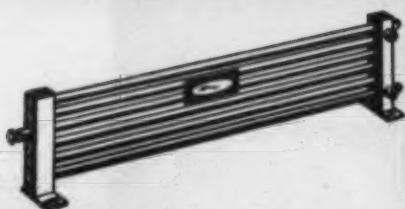


Cast aluminum liquid coolers for water, soda, beer. Separate refrigerant and liquid lines cast within an aluminum block eliminate freeze-up damage . . . insure sanitary, trouble-free operation.

Subcool liquid refrigerant . . . increase system capacity with Heat-X heat interchangers. High efficiency inner fins on suction line, provide maximum heat transfer, minimum pressure drop. Available in sizes 1/4 to 100 tons.



Condensers of the remote air and water type . . . complete with fan, motor, and tube-within-a-tube — water cooled with inner fins. A compact unit with cleanable water tubes. Write today for free bulletins.



THE HEAT-X-CHANGER CO., Inc.

BREWSTER - NEW YORK



Horizontal cross section shows five hollow risers cast integral with huge concrete stack which supports tower.

7-Point Code Designed To End Unethical Food Plan Operations In Cleveland

CLEVELAND—Most local freezer-food plan distributors and retailers "who are interested in keeping the industry above board and preserving faith with the public" have subscribed to a seven-point code of ethics drawn up by the Cleveland Better Business Bureau, Inc.

"Food-freezer plans which have been unethical in other cities have driven good men out of business and completely disillusioned the public," a BBB official said. "We hope to avoid this here, and I think we can."

The agency planned to publish a list of those subscribing to the code and a guide for consumers.

Under the code, distributors and retailers are required to:

1. Make it very clear that a freezer must be purchased.
2. State prominently the quantity and cuts of food which must be purchased at advertised prices, if food prices are used in advertising.
3. Avoid use of such expressions as "no cost to you" and "free," and general savings claims which are not explained.
4. Avoid use of all statements that food is being offered at or near wholesale prices or in wholesale lots.
5. See to it that if government grades of food are specified in advertising, the food so offered shall actually be government graded. Also, if packers' private brands or grades are advertised, the food must have been processed by those packers.
6. Make certain that when percent-

age claims of savings are advertised, they are qualified as prominently as the figure used to indicate whether the savings are on food costs alone, or upon the total food budget.

7. Put in writing any agreement, such as a "warranty" or "service contract," for which an extra charge is made, and give it to the customer when the sale is made or when the freezer and food are delivered.

Amana Names Distributor For San Joaquin Valley

FRESNO, Calif.—Establishment of Amana - San Joaquin Distributors here to handle distribution of Amana food freezers in eight central California counties in the San Joaquin valley, was announced recently.

Franchising of the new distributing firm was announced at the same time by B. K. Storey, Amana's regional sales manager.

Owners of the new firm are Joe Marsalisi, Jr., and Jim O'Gorman who until recently were top salesmen at Amana Freezer Distributors of Los Angeles.

Marsalisi, a native Californian, said the firm's initial goal is to increase sales of Amana freezers in the San Joaquin valley by 30%.

To help accomplish this goal, and to prepare for Amana's tripled production by the end of 1953, he explained, Amana-San Joaquin Distributors will institute an intensive dealer-salesman training program to increase dealers' sales output in the territory. In addition dealer coverage will be increased "wherever necessary," he added.

The firm is starting operations near downtown Fresno.

Frozen Food Distributor Hails Free Advertising From Freezer-Food Plans

CHICAGO—Though not in favor of the food-freezer plan in its present form—"but only because of its questionable methods"—Walter Greenspan, Perth Amboy, N. J. frozen food distributor, told fellow distributors, "We must admit that the frozen food plan has given us untold publicity and we didn't have to pay for it."

"We are going to do everything possible," he continued, "to build up volume on the promotion that someone else has done."

Greenspan declared, "The home freezer owner is fast learning that food plans do not make possible a 33% savings. They have learned that the food is merely a gimmick to sell a freezer."

"And with a somewhat belated effort by distributors, chain, and independent supermarkets, we are bringing home to the home freezer owner the fact that she can save most by buying when prices are low and not when she buys a freezer."

"The potential home freezer owner is learning that she can do better by dealing with appliance dealers. There she can get a freezer she can have confidence in, at a price that will save her money, and on terms she can afford to meet."

"And so we find that from all the initial confusion and chaos has come increased volume for all through more freezer space in American homes and through more interest in frozen foods . . . The distributors have attained new horizons in frozen food volume."



Rich Plan Corp. Expects To Be Operating In All Principal Cities by Mid-Year

Quality Foods Cited as Key to Freezer Food Plan Success; Many Must Be Sold on Frozen Products, Says Executive

CHICAGO—The Rich Plan freezer-food plan now has a volume of about \$30,000,000 a year and expects to be in every important city in the United States by mid-year, W. A. Bruce, vice president of Rich Plan Corp., Chicago, told a gathering of frozen food distributors here.

Speaking before a regional meeting of the Eastern Frosted Foods Association during the National Frozen Food Convention recently, Bruce also stated that Rich Plan intends to start a national advertising campaign about mid-year, carrying its message to consumers through national magazines.

He claimed that he had no knowledge of any intention of Rich Plan packing frozen foods under its own label. "I hear stories about it from outside sources," he declared, "but nothing at all from national headquarters."

He described the plan for the frozen food distributors and then answered questions from the floor.

FROZEN FOOD BOOKLET IS SALES TOOL

In talking about the plan, he noted that one of the educational tools used by Rich Plan salesmen is a booklet entitled "A Short Course on Frozen Foods." This, he said, was to convince people that they should be eating frozen foods. Everyone, he noted, is not convinced that frozen foods are a good thing, even though people in the industry now take that fact for granted.

Bruce declared that the freezer-food business must be built on the basis of good quality frozen food. The people who eat it must like it.

Asked how the frozen food distributor fitted into the Rich Plan, Bruce explained that the plan deals with the locker operator as a source of supply and that the locker operator is a customer of the distributor.

He said that Rich Plan uses the locker operator because that is the point where the meat is processed and where it is possible for the customer to get her meat cut to fit her own needs and desires.

Out of a \$250 food order, Bruce estimated that meat would account for about \$150 to \$170 of it.

DOES SALESMAN GET COMMISSION ON FOOD?

Here are some other questions asked him, and the answers: Does the salesman get a commission on reorders of food?

No. He doesn't even get a commission on the original order.

If a person buys a freezer from someone else, would you sell him food?

Normally not. But we will if he insists upon it.

How will a \$250 order last for six months?

On some foods, particularly juice concentrates, it won't last that long. But on others it will. But the customer, believe it or not, has built up savings under the plan and can go out and buy additional quantities as she goes along.

HOW MANY CUSTOMERS REORDER FOOD?

About how many of your customers reorder food from you?

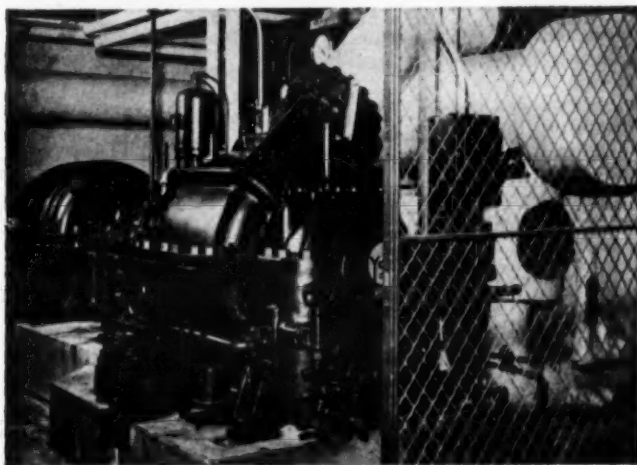
About 50% place reorders. Others buy some food from us and the rest elsewhere.

Aren't you getting complaints from people who bought their meat at the higher prices a few months ago when they see what the price of meat is today?

No, because they have been eating right along better than they ever did before. We use only U. S. Gov't. choice beef and Grade A fruits and vegetables. Before they joined the plan, these people didn't eat that kind of food. When they shopped, they might have looked at the good meat

CONDITIONING SYSTEMS LABORATORY

on each floor and are controlled by automatic dampers on exhaust grilles.



Close-up of 375-ton York Turbo Water Cooling System, using "Freon-11" refrigerant, installed in basement of tower building.

RESEARCH LABS ARE BIG USERS OF EQUIPMENT

Research has now become of such importance that almost every industry fully recognizes its value. Laboratories are being constructed everywhere. Some are big and imposing buildings such as the Johnson Wax lab. Many are comparatively small. Yet almost without exception, all are equipped with air conditioning and refrigeration systems of various sizes and types for many different experimental programs.

Whether or not proposed installations are intricate or commonplace, they generally require specialized, technical service such as you can readily offer. That is why it is good business to keep well informed of expansion plans of the manufacturing establishments in your own district.

POTENTIAL PROSPECTS IN YOUR AREA

It's easy enough to hand-pick a list of industrial concerns. You can also quite easily obtain the names of plant engineers, purchasing agents, managers, superin-

tendents and others. These often represent the best prospects you can line up for new equipment and they're certainly worth cultivating to develop interest in air conditioning and refrigeration as applied to fundamental research activities.

So plan a selling campaign of your own and stick to your plan. Write, phone or, better still, call in person on these prospective buyers. Discuss how air conditioning and refrigeration fit into research and are now serving industry in many different ways. And when the subject of equipment is at hand . . . explain why the majority of industrial research labs have installations that are operated with "Freon" refrigerants.

There's good reason. "Freon" refrigerants are safe . . . nonflammable, nonexplosive, virtually nontoxic, and their dependable, uniform quality is assured by exacting, laboratory-controlled methods of manufacture. These inherent characteristics of "Freon" refrigerants also contribute to economical, efficient and satisfactory performance of the system over long periods of time . . . an added safeguard of the owner's investment. In addition, "Freon" refrigerants meet all building codes everywhere. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



Seven separate systems control temperature and humidity conditions within these seven test rooms at the lab.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



"FREON" SAFE REFRIGERANTS

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon refrigerants

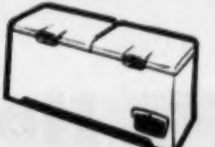


WITH **REVCO** 23 CU. FT. Chill Chest FOOD FREEZER

● You know you sell the very best freezer when it's built by Revco! Act now . . . get this line today.

Faster Freezing

ALUMINUM FOOD WALL CONSTRUCTION NEW REFRIGERATION SYSTEM



Write For Distributor's Name
REVCO, INC. - DEERFIELD, MICH.

1953 "BLUE BOOK" The Nationally Recognized ILLUSTRATED Book of Refrigerator Trade-in Values

One trade-in based on this BLUE BOOK will more than pay for the book!

order your copy today

\$5.00 each IN QUANTITIES 25 OR MORE \$3.00

NATIONAL REFRIGERATOR MARKET REPORT, INC. DEPT. AC-1 BOX 606 LOS ANGELES 25, CALIFORNIA



HOW TO ADAPT Fresh'nd-Aire window units to most any room decor is shown in this picture. This housewife has used matching wallpaper, thus getting all-season comfort and a unique decorative effect.

Samsons Selected as '52 Brand Name Retailer

NEW YORK CITY—Samsons of Milwaukee, Wis., was named Brand Name Retailer-of-the-Year in the electrical appliance field by a blue ribbon panel of retail executives meeting at the Hotel Plaza here.

The announcement of the award was made by Henry E. Abt, president of Brand Names Foundation, Inc., in a telegram to Harold Sampson, vice president of Samsons.

This is the second time Samsons has been honored by the Foundation.

Abt also announced the names of the four winners of "Certificates of Distinction" in the electrical appliance section of the Foundation's fifth annual competition.

They are: Mort Farr, Upper Darby, Pa., second place certificate winner; Frankel's Appliances, Inc., Huntington, W. Va., awarded third place; Raymond W. Hackett Appliances, Hudson, N. H.; and Gerhard's, Glenside, Pa. The Mort Farr firm was also honored in the 1950 competition.



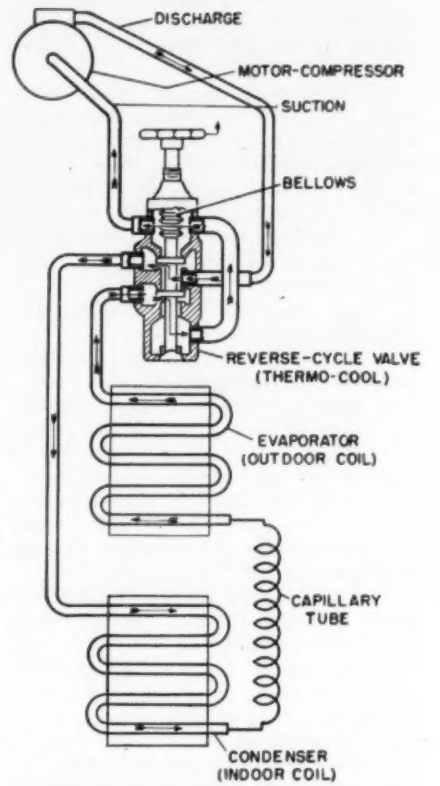
I-H Refrigeration Sales Up; To Extend Room Cooler Line

CHICAGO — International Harvester Co.'s sales of refrigeration equipment and service parts in the three months ended Jan. 31 amounted to \$8,785,000, or 3.1% of total company sales, compared with \$6,331,000, or 2.3% of total sales, in the corresponding period a year ago.

Total sales of the company in the quarter were \$282,710,000. This compares with \$270,877,000 in the like year-ago period. Net income was \$10,947,000, against \$10,364,000, a year ago.

John L. McCaffrey, president, reported that the line of three room air conditioners will be expanded by the addition of a fourth model.

Reverse Cycle Room Unit



A line of reverse-cycle room air conditioner units, called the "Thermo Cool" models, was introduced by Philco Corp. this year. With these units it is possible to quickly reverse the flow of the refrigerant in the unit to utilize either its air cooling or air heating functions.

The drawing above shows the flow of refrigerant in a reverse-cycle model. In this drawing the heating cycle is shown.

In the cooling cycle, the refrigerant gas comes from the discharge line of the compressor (at top of drawing) and is directed by the special reverse-cycle Thermo-Cool valve into the condenser or outdoor coil which dissipates the heat to the outdoor air. The refrigerant continues its flow through the evaporator or indoor coil where it again picks up room heat and returns to the compressor.

To heat a room, the valve position is changed, channelling the refrigerant to the outdoor coil which then acts as an evaporator, and to the indoor coil which becomes a condenser, bringing the heat into the room. Heat, which in cooling was dissipated outdoors, is now dissipated into the room.

The ¾-hp. reverse-cycle Thermo-Cool model delivers about 9,300 B.t.u. per hour and is claimed to be an effective room heater when the outside temperature drops to as low as 40°.

"Spent \$40 on ads. Got \$15,000 results!"



"Phone calls started immediately after the first Fedders dealer newspaper ad ran," says Lou Nachman, Nachman & Co., St. Louis, Mo. "Ninety per cent of the people we contacted bought Fedders units. We sold 50 units from 3 ads which cost us exactly \$40. You bet I'm trying in for the whole 1953 program."

"We couldn't have afforded to run ads like these!"



"The Fedders dealer newspaper ads with our store name in them brought excellent sales results," says Leonard J. Fleck, Fleck's Appliance Center, St. Louis. "We couldn't have afforded to run any ads like these dealer ads even in our neighborhood papers. Fedders knows the secrets of retail advertising, all right."

"Ads did a selling job for us at a very nominal cost!"



"Even though we do our own big space advertising, we feel the Fedders dealer newspaper advertising program was a sound business promotion for us," says I. W. McCloskey, Watt and Shand, Lancaster, Pa. "The ads did a bang-up selling job for us at a very nominal cost. We're going to use the program for the complete 1953 selling season."

"Sold 40 to 50 units from 3 newspaper ads!"



"1952 was our first year in the room air conditioner business," says F. W. Greissinger and C. E. Greissinger, Variety Vacuum, Harrisburg, Pa. "We got into it because Ott Distributors had the Fedders dealer newspaper advertising program. We felt it would help us sell. We sold 40 to 50 Fedders units from 3 ads. Just think what we'll do next year now that we know how!"

"Couldn't afford to advertise any other way!"



"We sold six Fedders Room Air Conditioners from one ad," says Bob Heimer, Bob's Cabinet Shop, St. Louis. "Sorry I didn't go along in the very beginning, but I sure am going to tie in 100% in 1953. We could not afford to advertise in any other way. Even if we could, I'd stick to Fedders dealer advertising program."

"We attribute 90% of our sales to dealer campaign!"



"We sold more Fedders units out of this store than all the competition in town," says H. Clifford Baughman and his son, Baughman's Television & Appliances, Hanover, Pa. "We had 30 inquiries from the first ad and made 15 sales. We attribute 90% of our Fedders sales to the Fedders dealer newspaper program!"

How did we sell so many Fedders Room Air Conditioners?

HOW did these Fedders dealers clean up? It's simple. They helped Fedders test a dealer newspaper advertising plan in three markets last year. The way those ads brought in customers and relieved them of thousands of dollars, you'd think there was some kind of hypnotism involved. But let's be modest and just say that Fedders knows the secret of retail advertising. Here's what this dealer newspaper program gives you:

1. The biggest, most concentrated barrage of newspaper ads ever run during the selling season.
2. Lower cost per ad.
3. Split-second timing...on the hottest days in the heart of the selling season.
4. Your name in BIG PRINT in your own market.
5. Better tie-in with Fedders national advertising.
6. Greater Fedders dealer identification.

You'll sell more and profit more if you tie in. See your Fedders distributor right away and get full details on the complete 1953 Fedders merchandising package. Or write to Fedders-Quigan Corp., Dept. AC-3, Buffalo 7, New York.



UNITED WE SELL
FEDDERS

20 Distributors Added To Handle Remington Line

AUBURN, N. Y. — In a further expansion of its national sales organization, Remington Corp.'s Air Conditioning Div. has appointed 20 additional distributors for its console and window-type room air conditioners, M. L. Judd, general sales manager, announced.

The new distributors are:

Alabama-Florida Distributing Co., Birmingham; Mack Electric Co., Dothan, Ala.; Plymouth Electric Co., New Haven, Conn.; Robertson Supply Co., Orlando, Fla.; Edwards-Harris Co., Atlanta (dual distributorship); Westinghouse Electric Supply Co., Evansville, Ind.; Lighting, Fixture & Electrical Supply Co., Inc., New Orleans.

Henry & Clark, Boston (dual distributorship); J. M. Ober, Inc., Detroit; Continental Electric Co., Kansas City, Mo.; Twin States Distributing Co., Charlotte, N. C. (dual distributorship); H. Leff Co., Cleveland; Westinghouse Electric Supply Co., Columbus, Ohio; Westinghouse Electric Supply Co., Cincinnati; Westinghouse Electric Supply Co., Dayton.

Danforth Corp., Pittsburgh (dual distributorship); Westinghouse Electric Supply Co., Pittsburgh; Graybar Electric Co., Nashville (dual distributorship); Westinghouse Electric Supply Co., Clarksburg, W. Va.; Westinghouse Electric Supply Co., Clarksburg, W. Va.; Westinghouse Electric Supply Co., Wheeling, W. Va.

Service & Supplies

Blanket Mailing of Postcards Gets Service Firm's Name Into Most Homes; Monthly Lists Turn Up New Prospects

DENVER, Colo.—Literally "blanketing the city" with a simple printed postcard has proven a highly effective means of building refrigeration service volume for Dependable Refrigeration Service Co. here.

The all-important element in building up volume is making the first contact, according to Robert Glanville, head of the firm.

"Leaving decals on the refrigerator, following up old accounts, reports of refrigerator sales, etc., can provide plenty of new customers and repeat business," he said.

"However, it has been my experience that the first service firm which comes to the appliance owner's attention is usually the one that will be consistently called for repair work.

"Therefore, instead of attempting to isolate individual prospects and to contact them through direct mail telephone, etc., we have simply attempted to get our firm name into as many homes as possible via the blanket mailing route."

The 2¢ postal card utilized by Dependable Refrigeration Service is headed "We Need Each Other." Copy below points out "You need my service, I need your patronage. If you have refrigeration or appliance troubles, I have the remedy for them. Guaranteed satisfactory service."

Below, Glanville lists appliance brands for which he is an authorized repairman, plus refrigerator brands, many of which have been "orphans" for many years.

The usual reaction of the housewife upon receiving the postcard has been to put it away for later reference, Glanville has found. He firmly believes that the reference "We Need Each Other" has been responsible for saving the card.

"Many of our new calls from all

parts of the city have been traced to the fact that the housewife slipped the postcard away in a drawer, on a back shelf of the refrigerator, or somewhere where it could be found quickly when needed," he said.

Cards are mailed out monthly, to a separate section of the city each time, and are mailed at the rate of approximately 1,100 per issue. Eventually, when the entire city is covered, Glanville intends to repeat the process.



FRANK REED BRANT S. BEAUDWAY

Acme Names Controller, Manufacturing Manager

JACKSON, Mich.—K. A. Weatherwax, president of Acme Industries, has announced the appointments of Frank Reed as controller and assistant secretary-treasurer and Brant S. Beaudway as manufacturing manager.

Reed's responsibilities will include all inter-plant controls and the direction of budgetary activities.

Reed comes to Acme from Stubnitz Greene Spring Corp. in Adrian, Mich., following six years with the latter firm as secretary-treasurer. Earlier, he was associated with Ernest & Ernest in Detroit as a member of its special service staff, acting as an industrial specialist. In this capacity, he established cost and accounting systems in various companies.

Beaudway, who will be responsible for all phases of manufacturing, comes to Acme from Oliver Corp., following a long and extensive career as an executive in plant administration with that firm.

He was the plant manager at the Shelbyville, Ill. plant of Oliver and was general superintendent of Oliver's Plant No. 1 at South Bend, Ind. for two years. He had also served as assistant to Oliver's first vice president for several years.

During World War II he served four years as a military government officer with the U. S. Government and was stationed in Germany.

Corrosion Control

Why Does Anode Corrode, Cathode Not? Briquette Additives Being Sought To Simplify Inhibitors

CHICAGO — Causes of corrosion and possible means of preventing it were outlined for the Chicago ASRE section recently by R. G. Rydell of National Aluminate Co.

Comparing corrosion to a battery cell, Rydell explained that a difference of potential exists between the anode or portion of metal which corrodes and the cathode or portion which does not corrode. Currents flow through the corroding solution which acts as the electrolyte in the process.

Some 17 reasons are known today for this potential difference, he said, including the major ones of point temperature differences, abrasions of the metal surface, differences in composition of the corroding solution, and differences in oxygen content of the solution.

Data from brine spray cooler tests conducted at the Wilson & Co. plant were also presented by Rydell, who

explained that brine is a good conductor resulting in current flow and accelerated corrosion. This conductivity factor also makes coupling of dissimilar metals in brine solutions a serious problem.

The method of corrosion protection desired is the formation of deposits in the form of a tough, thin film which effectively inhibits corrosion, he said. The type of deposit and adherence to the metal surface determine its effectiveness.

Of the corrosion inhibitors employed in the brine cooler tests, it was found that polyphosphate silicate was the most effective. The ratio of polyphosphate to silicate was not critical between certain limits.

In discussing water treatment of refrigeration condenser cooling water, particularly recirculated water, Rydell indicated the chief problems here are scale, corrosion, and microbiological activity.

The evaporative cooling of water increases the concentration of mineral constituents since these are precipitated in the evaporative process. When the point of maximum solubility of the scale-forming minerals is exceeded, scale is deposited. Blow-down or rimoff of the recirculated water to hold down the concentration of solids was recommended by Rydell.

Two possible additives, depending on the type of hardness and concentration have been developed, and the feed of these materials to smaller systems can be accomplished by enclosure in a wire basket hung at the outlet in the cooling tower or evaporative condenser collecting basin.

Efforts are being made to develop both the corrosion inhibitors and water hardness treatments into a briquette form having the proper rate of dissolution, so that utmost simplification of application will be achieved, he indicated.

PLENTY FOR FREE

For "easy-to-get" product information . . . use coupon on "What's New" page.

NOW... MORE THAN EVER...
THE FINEST REFRIGERATION OIL
... at any price!



ANSUL NON-FOAMING REFRIGERATION OIL

NOW . . MORE THAN EVER . . . ANSUL is the FINEST REFRIGERATION OIL at any price! In addition to the features which have made it outstanding in the past . . . High Lubricity, High Stability, Low Moisture and Low Wax . . . a vital improvement has been made. ANSUL OIL IS NOW PROCESSED TO PROVIDE NON-FOAMING CHARACTERISTICS . . . a distinct advancement in the science of refrigeration lubrication.

ANSUL is the LARGEST SELLING REFRIGERATION OIL sold through Refrigeration Wholesalers . . . EXCLUSIVELY.



Write for more complete information on ANSUL NON-FOAMING REFRIGERATION OIL. ANSUL Technical Bulletins are also available to Refrigeration Service Engineers through Ansul Wholesalers who welcome every opportunity to serve the men of the industry.



ANSUL
Chemical Company

REFRIGERATION DIVISION • MARINETTE, WISCONSIN

MANUFACTURERS OF REFRIGERANTS AND REFRIGERATION PRODUCTS, INDUSTRIAL CHEMICALS, SPECIAL CHEMICALS AND DRY CHEMICAL FIRE EXTINGUISHERS — DISTRIBUTORS OF DU PONT "FREON" REFRIGERANTS

Automatic 'Brain' Controls 8 Zones of Summer-Winter System for Heating, Cooling, Humidifying \$1.5 Million Newspaper Plant

LINCOLN, Neb.—The \$1,500,000 newspaper plant just completed for the Journal-Star Publishing Co. here features a year-round air conditioning system.

Three units, with a capacity of 260 tons each, completely air condition the entire 93,270 sq. ft. of floor space, the building being set up in eight independent zones.

The air conditioning system installed by Natkin & Co. has the dual role of keeping personnel comfortable and balancing metal heat, along with providing proper humidity in storage areas for paper stocks. Air is filtered before entering the conditioning units.

Air zones controlled by thermostats provide different air temperatures and humidity in the respective areas which include editorial departments, composing, job printing, stereotyping, lithography, bindery, press rooms, storage and business offices.

Humidity Important

Humidity control units operate in conjunction with the air conditioning system. They control the water content of all air entering the various departments on a wet-medium-dry basis. This factor is especially important in job printing where an increase in humidity cuts down static, age-old bugaboo of the printing craft.

The new plant is said to be one of the finest, most efficient newspaper and printing plants in the United States. Plants over the country were studied for more than 10 years before embarking on the two-year design task. Construction required more than three years during which the newspaper and printing division continued publication without slowing operation.

Thermostats Control Zones

The Johnson Service control setup for the plant provides a completely automatic "brain" system. Any indoor weather condition may be selected, summer or winter, in each of the building's eight zones, merely by setting the thermostats which regulate the heating and cooling equipment.

In five of the air conditioned zones, control is accomplished by mixing dampers at the central fan, which automatically furnish just the right amounts of cooled and tempered air. In the other areas, three-way mixing valves vary the effect of the cooling coils.

Control of the primary air delivered to the air conditioning units is accomplished through Johnson "Weather - Compensated" duo-stat

control which coordinates the entire heating system.

Air Vents on Roof

Air vents were installed on the building's roof as an integral part of the air conditioning system. Air conditioning units, compressors, and blowers are housed in the basement. A basement utility room houses the heat exchanger for the air conditioning system, hot water storage, hot water heater, humidifier, and air compressors. Air conditioning units adjoin the utility room.

Air conditioning maintenance falls under an engineering staff of two persons and a custodial staff of eight. The engineers are equipped with a modern machine shop provided with tools and machinery to service some 400 electrical motors.

Water costs in the new plant will average about \$300 a month, varying seasonally, with the major portion of water used for operation of the air conditioning system. Hot water storage is provided by a 500-gal. storage tank. Water also is used in cooling hot metal and in lithograph printing. Drainage facilities, which include storm sewer outlets, are found in two company-owned sewers leading from the building on two different streets. Sewage disposal is through a third outlet.

Air Conditioning Is Only Part of \$2,500 Electric Bill

Electrical costs will average about \$2,500 monthly. Major expenditure in this category will be for lighting of the plant and offices. Second largest users of power are presses, electrical melting pots on the type-casting machines, and the air conditioning units.

Electricity will be supplied on a demand basis, with special transformers to handle peak loads, especially in hot weather when the air conditioning peak is reached. The company will pay a penalty in order to maintain the largest possible peak production needs, which means a higher cost rate for the average power used.

Piped compressed air is used extensively in the job printing where it is employed to separate sheets being printed, and in the stereotyping where the air forces hot lead into the plate forms which eventually go on the presses. Compressed air also runs book presses in the bindery and air brushes in the art department.

Consumers Public Power District will supply steam heat for the plant at a cost ranging from \$350 to \$700

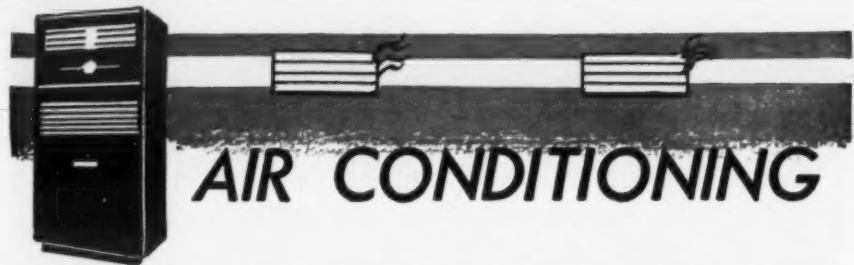
a month, depending on the season. Steam is used in the winter also to keep ink heated and keep it flowing for the presses.

Gas burners in the stereotype department consume (at a cost of about \$125 a month) most of the natural gas used in the plant. The burners are lowered into the giant vats of lead, and working on an acetylene-torch theory of forced air, keep the lead at constant temperature of 600° F. Other gas is used for the two 85-gal. water heaters and the gas jets in job printing, drying printed ink and cutting down static electricity. A special gas carburetor mixes air and fuel economically and efficiently.

Efficient Layout

Points of efficiency making for economical production include the eight-zone air conditioning system, planning of production departments in sequence on the same floor, accessibility to the public, well-planned traffic patterns inside the two-story-and-basement building, and detail-studied arrangements of each department layout to save all possible space and steps.

Built at a cost of about \$10 a square foot, the plant's suspended ceilings provide access to a maze of 90,000 ft. of electrical wire, 25,000 ft. of conduit, 200,000 ft. of telephone wires and lengthy runs of air conditioning and ventilating ducts. The latter were installed by C. S. Guenzel



Co., sheet metal contractor of Lincoln.

Three elevators serve the five different floor levels of the two-story building and basement. Railroad trackage alongside the building's loading dock permits the annual unloading of 200 box cars as well as tens of thousands of trucks a year.

The comfort and convenience of the employees as well as the public was the consideration in the planning of the heating, cooling, humidification, lighting, flooring, color schemes, lunch room, and rest room facilities. Lunch room lounges have been provided on both the first and second floors.

In addition to comfortable chairs and tables, there are refrigerated vending machines for milk and soft drinks, plus vending apparatus for coffee and other refreshments. There are also hot plates for the use of employees. Profits from the vending machines will go into an employees' fund to be used as the employees see fit.

Architecture styling in the new building is contemporary design, decorated by travertine and green interiors. Air conditioning load is minimized by heavy insulation and construction which is windowless except for two narrow structural glass apertures on first and second floors.

Low Partitions Help Air To Circulate

Adding to the openness of the rooms is the lighting arrangement. There are no hanging fixtures or obstructions below the ceiling. All the lighting fixtures are recessed or hidden. The low-type partitions of white oak paneling give free visibility and circulation of air. The ceilings are of oyster-shell colored acoustical plaster with the light wells of acoustical tile.

Every effort for protection against fires was made in the planning and construction of the building. Reinforced concrete girders, metal fixtures, and sprinkler and notifier systems all lend to safety measures. Whenever a sprinkler or notifier is set off, an automatic alarm rings in the fire department headquarters.

The Assenmacher Construction Co. of Lincoln had the general construction contract. Plumbing, heating, and air conditioning installation was by Natkin & Co. of Omaha and Lincoln. Commonwealth Electric Co. of Lincoln had the electric wiring. Davis & Wilson of Lincoln were the architects.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

HOW TO MAKE MORE SELLING PALMER



Home owners are no longer willing to endure scorching hot days—unbearable restless nights when heat makes sleep impossible.

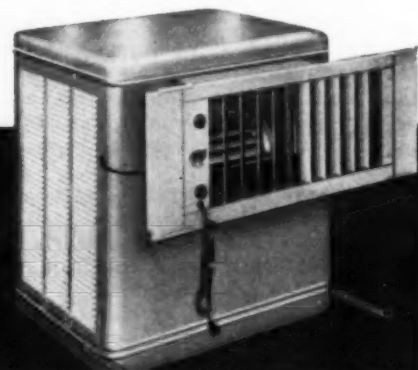
Thousands have sought relief by installing air conditioning equipment, but millions of home owners either cannot afford such equipment or are unwilling to pay the costs involved. The answer is simple—

SELL THEM INEXPENSIVE, EFFICIENT, LOW COST PALMER COOLERS

By actively promoting Palmer Coolers, you are opening up a virtually untapped market—one that can mean big vol-



B-18-D



BV-32



FC-15-P



F-15-D

SNO-BREZE



"JOB TAILORED" means money saved

• Your cold plate dollar goes further when you specify DEAN because you eliminate waste! You get a plate in the exact size you need... not one that is almost right, but a plate that accurately meets your specifications. You name the size—you name the shape... we make it!

You can have plates in zinc metalized steel, stainless steel and in other metals. You can get cylinders, U's, angles, tanks, etc., and also plates for baudelot-type coolers.

Using DEAN "job tailored" cold plates means dollars in your pocket on every job. Try them!

SEND FOR TECHNICAL DATA BOOK

Get the details on DEAN Cold Plates for ice cream cabinets, locker plants, soda fountains, farm milk coolers, farm freeze cabinets, low temperature test rooms, frosted food refrigerators, window displays, food counters, refrigerated transportation and subzero applications for industrial chilling.



DEAN COLD PLATES

ANY SIZE
ANY SHAPE
MOST METALS

DEAN PRODUCTS, INCORPORATED
1042 DEAN ST., BROOKLYN 16, N. Y.
Sterling 9-5400

How To Get an Exclusive Franchise

Outsell the Other Fellow, Have a Long-Range Plan, a First Class Service Organization

CHICAGO—How should an appliance dealer go about trying to get an exclusive franchise for a line when other dealers are already franchised for that line?

H. B. Price, Jr., of Norfolk, Va., in a talk during the annual convention of the National Appliance & Radio-TV Dealers Association, suggested that such a dealer do these 10 things:

1. Study his market thoroughly so he'll know more about it than his competitors.
2. Develop a logical merchandising program to cover that market.
3. Set up a first-class service organization, if he doesn't already have one.
4. Choose a franchise that will give him confidence he can do business with the supplier principals in the way he desires.
5. Be prepared to devote a long time to the franchise, since this should be a long-range program.
6. Be prepared to get his share of his market for the supplier under all business conditions.
7. Study the supplier's merchandising program to see if it is compatible with his own.
8. Study all other phases of the supplier's set-up thoroughly.
9. Then tell the supplier about his plans and ideas; the supplier's ideas may be the same as his.
10. Be sure he has the financial capabilities to carry out his program and that of his supplier.

In his talk, Price emphasized the importance of good planning and recommended that all dealers have a long-range plan. He said planning is "an essential ingredient of our business," and that proper planning "will accelerate your progress." Those who don't plan, he declared, are just "drifters."

Price pointed out that he analyzes his market and sets quotas on each appliance. He suggested that other dealers should do likewise so they'll have a goal to work toward.

Also stressed was the need for contests and other incentives to motivate salesmen. In this connection, Price gave details of a range-selling contest between his organization and Joske's in San Antonio. Although his organization lost the contest, it sold more than 1,000 ranges in the 37 days of the competition and December sales were at an all-time peak, he reported.

The contest was "romanced" in just about every way possible, Price said, adding: "We made the men want to work." Promotional gimmicks used included a breakfast session for Price personnel at which the contest was announced, "Beat Joske's" badges for the personnel to wear, store banners, bulletin board progress reports, and newspaper, TV, and radio publicity.

Top prizes were trips to Miami for the Orange Bowl festivities. Other prizes were also set up, including those for non-selling employees who

supplied the names of good prospects. According to Price, the contest generated tremendous interest and excitement among his personnel.

Price noted that his firm was offering a trip to New York for winners of a refrigerator contest (goal: 500 refrigerator sales in one month) and that contests on other appliances were coming up.

Calif. Home Ec. Assn. Plans Big Homemaking Exhibition

SAN FRANCISCO—The fourth biennial convention of the California Home Economics Association, to be held here March 28-30, 1953, will feature an extensive homemaking exhibition.

Set for the Palace hotel, the exhibition will present the latest developments in all types of homemaking ideas, materials, and products. Leading manufacturers and home research firms have been invited to participate.

The convention program will include clinical studies of latest research and discoveries in several fields, including food, and equipment.

Anchor Distributing Names 5 More District Managers

PITTSBURGH—J. Warren Russell, vice president and sales manager of Anchor Distributing Co. has announced the addition of five new district managers to take care of the Deepfreeze and Blackstone lines recently added by Anchor.

The new district managers are Joseph Fellner, Joseph Busch, Bernard Mazer, Norwood McDaniel, and Clifford J. Rylands.

Westinghouse Creates Atlanta Branch Office

ATLANTA—O. O. Rae, manager of Westinghouse Electric Corp.'s southeastern district with headquarters here, has announced the creation of an Atlanta branch office to provide better service to customers in the area and in line with fundamental changes in the company's district organization pattern. The new branch will be comparable to the Birmingham, New Orleans, and Charlotte branch which have been in existence for a number of years.

The move will also relieve southeastern district industry and staff managers of direct local supervisory duties.

With the creation of the Atlanta branch, Rae announced the appointment of Thomas Fuller, Jr., as branch manager. A veteran of 18 years' service with the company, Fuller joined Westinghouse in 1935 upon graduation from the Georgia Institute of Technology. Fuller comes to his new position from that of Chattanooga, Tenn., branch manager, in which capacity he has served since March, 1948.

After completion of the Westinghouse graduate student training course, he served in several sales capacities until 1939 when he became office manager at the Washington, D. C. office.

To implement the branch office staff, Fuller announced the appointment of M. A. Land as sales supervisor and S. M. Morton as office manager. George W. Miller was appointed distribution apparatus manager by B. M. Gatling, Jr., electric utility manager.

Along with the reorganization plan, branch service and engineering managers were named. H. G. Harvey, southeastern district engineering and service manager appointed T. J. Woth as Atlanta branch engineering manager, and G. W. Alexander as branch service manager.

W. F. Langefeld Appointed Maytag Purchasing Chief

NEWTON, Ia.—William F. Langefeld, former director of purchases with Material Service Corp. in Chicago, has been appointed director of purchases for The Maytag Co. here. He fills the vacancy created when C. W. Clauser, former Maytag purchasing head, was appointed personal assistant to the vice president in charge of manufacturing.

Norge Appoints Hendrix San Antonio Distributor

CHICAGO—Appointment of E. G. Hendrix Co., San Antonio, Texas, as a distributor of Norge appliances was announced recently by H. L. Clary, vice president in charge of sales for Norge Div. of Borg-Warner Corp. E. G. Hendrix heads the firm and H. Koplan is general manager.

Norge Takes Salesmen On 'Plant Tours' with Three-Dimensional Slides

CHICAGO — Three-dimensional slides are being used by Norge Div. of Borg-Warner Corp. to tell the story of Norge factory facilities to sales people.

Unveiled for the first time during meetings of distributor principles and salesmen in Chicago, the program uses standard Kodachrome slides made with stereopticon-type cameras.

The slides are projected on a specially designed screen through a stereopticon projector. Viewers wear polarized glasses. The films will be shown at meetings in six cities this month.

H. L. Clary, vice president of Norge, explained that 200 slides and a professionally prepared script enable plant managers to take viewers on a complete tour of Norge's entire production of appliances.

"For about \$2,500 we are able to take more than 2,000 of our key people on this 'plant tour,' instead of straining personnel and purse to get them into the four plants located in separate cities," Clary further indicated.

The Muskegon and Muskegon Heights, Mich. plants and the Herrin and Effingham, Ill. plants were photographed complete from loading dock to shipping room for the slide pictures.

"While we have only adapted this technique to our sales meetings, it has other possibilities. The vivid three-dimensional presentation can be used to introduce new products, to merchandise advertising and publicity programs, and to make strong impact on the retail customer," Clary declared.

"Norge expects to continue pioneering this dramatic and economical medium."

J. A. Musselman Appointed Refrigeration Field Representative for Bendix

SOUTH BEND, Ind. — Joe A. Musselman of Fort Wayne, Ind. has been named refrigeration field representative for Bendix Home Appliances, a division of Avco Mfg. Corp.

Parker H. Erickson, director of sales for Bendix, announced the appointment. The new field representative will operate out of the appliance firm's South Bend offices.

Musselman joins Bendix after five years with the Nash Kelvinator Sales Corp. as a district manager. Before that he spent 11 years with International Harvester as a manager of service parts.

Money... COOLERS

ume—big profits for you. Either the Sno-Breze or Palmaire line of coolers covers your complete market. These lines include compact coolers for a single room—larger coolers for office, store or home—giant coolers for industrial plant or theater.

These coolers are manufactured by the Palmer Manufacturing Corporation—pioneer in evaporative coolers and America's largest manufacturer. They carry the Good Housekeeping Seal of Approval.

Palmer coolers are backed by a complete advertising and merchandising program. Let this line of modern coolers make money for you. Mail the coupon.







PALMAIRE

Palmer Manufacturing Corporation
2200 W. Filmore Street
Phoenix, Arizona

Please send me information on Palmer Coolers. I am interested in ☐ A Distributorship ☐ A Dealership

Name.....

Company.....

Address.....

City..... Zone..... State.....

true

MODERN COOLERS FOR A MODERN AGE



Model T-832

Offers you

a quality line of

DRY BOTTLE BEVERAGE COOLERS

Modern Cabinet Design—Ahead of the Industry.
Self-contained Models Ready to Plug in.
Kelvinator Hermetic Units—Five Year Warranty.
Franchised Territory.

FOR ADDITIONAL INFORMATION WRITE:

TRUE MANUFACTURING COMPANY
2905 PINE STREET, ST. LOUIS 3, MISSOURI
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INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

Dividends: Eliminate all corporate taxes on the first \$10,000 (and up to \$100,000, as revenue needs dictate) of dividends distributed to stockholders.

Surtax: Increase the surtax exemption to \$100,000, and increase the normal tax to 25 per cent.

Depreciation: If corporate assets do not exceed \$1,000,000 at the beginning of the tax year, permit 50 per cent of the depreciation basis to be deducted as the taxpayer, in his discretion, shall determine.

In addition to the recommendations contained in the report, Mr. Horne said he had also "been impressed by suggestions received from small businessmen all over the country, as to the number of ways in which it may prove feasible to provide for salutary and yet equitable changes in the present tax structure with resultant benefit to small business."

"I have been particularly impressed," he said, "by suggestions concerning (1) the introduction of some form of graduation of rates in the normal tax and surtax, (2) an increase in the present surtax and excess profits tax (if retained) exemptions of \$25,000, (3) the advantage to be gained by adoption of the British system of permitting business losses to be carried forward indefinitely, rather than only for 5

years as at present, (4) the need for clarification of the provisions of Section 102 of the Internal Revenue Code, (5) the possibility of giving a small corporation the option of being taxed as a partnership, (6) the desirability of a more flexible basis of depreciation, and (7) the extension of credits or deductions for dividends distributed to stockholders."

The following laws of interest to manufacturing companies will expire on the dates shown unless other action is taken by Congress:

The import duty on foreign copper, currently suspended, will again become effective on Feb. 15, 1953, unless Congress acts otherwise.

The President's authority to propose reorganization of executive agencies as recommended by the Hoover Commission. Expires March 31, 1953.

President's Emergency Powers. Expire April 1, 1953.

Price and wage controls, plus rent controls in critical defense housing areas and in areas that extended controls by local option, as provided in the Defense Production Act. Expire April 30, 1953.

The Reciprocal Trade Agreements Act. Expires June 12, 1953. Present agreements under the Act expire Jan. 1, 1954, at which time, if the Act is not renewed, Smoot-Hawley tariff rates will go back into effect. Most tariffs are at present from 50 to 75 per cent below Smoot-Hawley rates.

The Defense Production Act. Titles I, II, III, VI, and VII. Expire June 30, 1953. In addition to the wage, rent, and price controls provisions which expire earlier, the Act also provides for allocation of defense materials.

Appropriations expire June 30, 1953.

Excess profits tax on corporate earnings. Expires June 30, 1953.

President's authority to control exports. Expires June 30, 1953.

Authority to award defense contracts on negotiated rather than on advertised basis. Expires June 30, 1953.

President's authority to order reserve components to active duty for 24 months. Expires July 1, 1953.

Authority to extend armed forces enlistments. Expires July 1, 1953.

Worth Remembering

"Years ago, over the desk of the copy chief of a well-known New York advertising agency, we saw a framed legend that has stuck with us ever since. It read:

The best copy is written with the rubber end of a pencil.

"We have since observed that this is true, not only of advertisement but of business reports and letters, instructions and directions, speeches, articles, and all manner of written business communications, addressed to the public, to customers, or to the organization.

"Leaving out words, sentences, paragraphs, shortens the reading time. And even to save a fraction of a second is important in this busy world. As one writer has said, 'The most valuable thing in business is a minute.'

"But time saving isn't all. It has been our observation, over the years since we first read this legend, that leaving out words often clears up meanings. When we say exactly what we mean to say, we waste no words.

When we are not quite sure of our meaning—have not thought through—we write on and on, in a vain attempt to make ourselves understood. When we do this, we confuse rather than enlighten the reader. If we start eliminating words, usually we discover what we are really trying to say.

"The rubber end of the pencil has come to symbolize to us both brevity and clarity.—*Management Briefs.*

Information, Please

What do employees want to know about the company they work for? Industrial surveys reaching the Chamber of Commerce of the United States indicate the following queries in the order asked:

The company's future prospects; how promotions are decided; how American business works; company profits; how my pay is figured; use made of union dues; and what the union is trying to get.

Salesmen Beware!

Business management must begin now to reduce the cost of effective selling, because the much-heralded buyers' market will become a hard fact by the end of this year. Howard L. Franks, manager of sales personnel and control of the chemical division of the General Electric Co., adds his testimony to this foregone conclusion.

The average salesman costs his company \$10,000 a year to maintain in the field, he estimates. Such a salesman, according to Mr. Franks, works 250 days annually and averages three calls a day.

On this basis, the General Electric official extrapolates, the average salesman costs his company \$21 "each time he pushes open a door." The salesman must sell \$210 of product on each call to justify his business existence, according to Mr. Franks.

A fourth call every day, he continues, would reduce the average cost for each call to \$16. Mr. Franks concludes that better utilization of salesmen's time is the key to cost reduction in the selling end of any business.

"Time is the salesman's greatest asset, but like another powerful commodity, electricity, it cannot be stored," he said. "Neither can we recover time once lost."



T. H. MARTIN

E. V. SULLIVAN

Sullivan and Martin Take New Posts at Lau Blower

DAYTON—Thomas I. Byrd, vice president of The Lau Blower Co. here, announces the appointments of Edward V. Sullivan as sales manager of the Fan Div. and Thomas H. Martin as manager of advertising and sales promotion, the post formerly held by Sullivan.

Before he joined Lau Blower four years ago, Sullivan was an account executive with the Hutzler Advertising Agency, also of Dayton. Hutzler handles the Lau Blower account.

Martin has been associated with the Monsanto Chemical Co. Mound Laboratory at Miamisburg, Ohio.

Raming Heads Commercial Sales at Frigidaire Branch

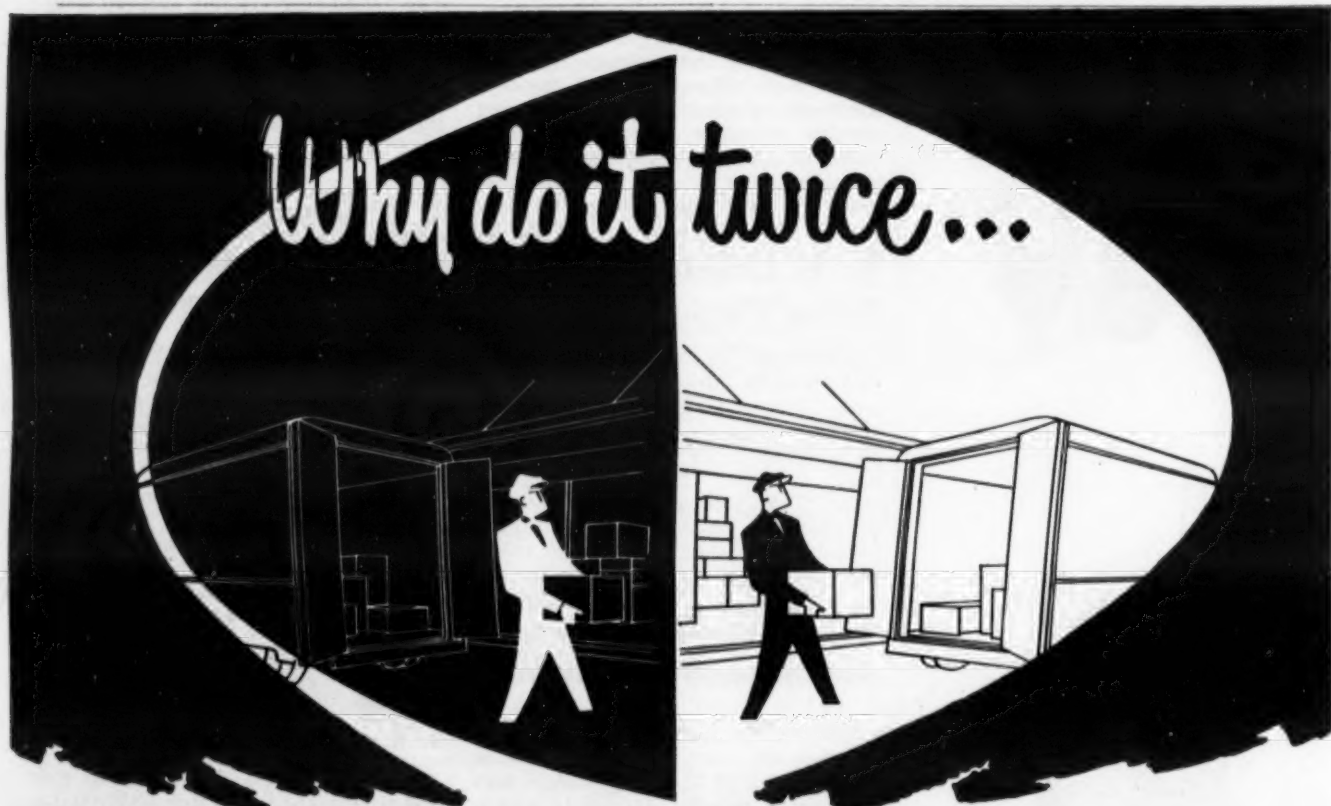
BUFFALO—C. F. Raming, a division manager of the Frigidaire Branch Commercial Sales Dept., has been appointed commercial sales manager, according to J. F. Cain, branch manager.

Raming started with the Frigidaire branch organization in April, 1947, as a sales engineer. In January, 1952, he was promoted to division manager and has remained in that position until his new appointment.

Francis Young Appointed Amana Personnel Director

AMANA, Iowa—Appointment of Francis R. Young as personnel director of Amana Refrigeration, Inc., was announced recently.

In this capacity, he will direct the freezer manufacturer's employment, employee relations, safety, training, and plant security programs.



KOLD-HOLD truck refrigeration WILL PAY FOR ITSELF!

Hundreds of cases have proven that without truck refrigeration you may be doing double the work. Unrefrigerated trucks cut down on the length of hauls and the time the truck is on the road. Smaller loads and shorter runs mean double trucking — and double handling time in loading and unloading. Undelivered loads at the end of a work day present a problem.

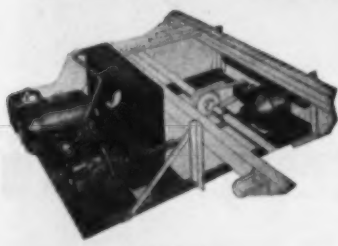
Kold-Hold dependable truck refrigeration saves this loading and unloading time. It maintains pre-determined temperatures throughout day-long hauls. Undelivered

loads can be left in the truck for the next day's delivery because your truck becomes "a cooler room on wheels."

One user reports, "If the results we have experienced with this installation are an indication of what we can expect in the future, you may be assured that all our new units will be Kold-Hold equipped. We are also replacing our other trucks with Kold-Hold as soon as possible."

Couple the savings you make when you "don't do it twice" with the fact that you have no spoilage losses and that your product is delivered in prime condition and you have the reason why Kold-Hold truck refrigeration pays for itself.

KOLD-HOLD can answer any refrigeration problem!



KOLD-TRUX

Which do you prefer . . . Mobile or Hold-Over truck refrigeration? Kold-Hold can give you either or a combination of both.

When your weather worries start, pick out the routes with the biggest refrigeration problems and call on Kold-Hold to give you a satisfactory solution. They will give you the right combination for your needs from such highsides as the Kold-Trux Mobile Unit, a mounted compressor, or make-and-break assemblies, coupled to such lowsides as Kold-Hold Hold-Over Plates, Thin Plates, Serpentine Quick-Action Plates, or Blowers.

Why not give us the details of your problems and let our engineers find the most efficient solution for you. Write today for details.



HOLD-OVER PLATES

Tell us your truck refrigeration problems and send now for complete data and literature.

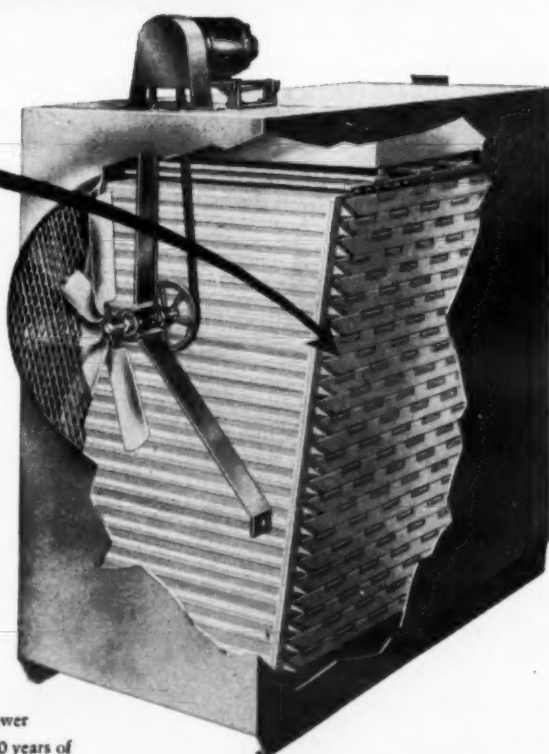
KOLD-HOLD

20-Year Guarantee!

On the Wetted Deck Surface of Koppers Pressure-Treated Wood

HALSTEAD & MITCHELL COOLING TOWERS

2 TONS to 100 TONS CAPACITIES



HOUSING

10 gage (3/4"+) sheet-steel case with 3 coats Bitumastic lining. Electrically welded cabinet.

FAN AND DRIVE

Quiet-operating stainless steel 8-bladed fan, stainless steel shaft, chrome-dipped rust-proofed pulleys. Cast iron bearing supports.

Write for descriptive bulletin

HM

Halstead & Mitchell

AT LEADING WHOLESALEERS EVERYWHERE

OFFICES: BESSMER BUILDING PITTSBURGH 22, PA.

Commercial Refrigeration



SUPERMARKET MEAT DEPARTMENT. Display cases act as a front to the meat cutting room. Cheeses and cold-cuts are displayed in the self-service case and fresh cuts displayed in double case at the right. This double-size case can be loaded from the rear. Note the water cooler at the extreme right for quenching customer's thirst.

Drive-In Supermarket

Open Entryways, Wide Aisles Keep Traffic Moving Past Open Cases, Even at Rush Hours

DALLAS — Use of three display cases as part of the front wall of the glass-enclosed meat processing room is a feature of the equipment layout at Bowen's Supermarket, a new drive-in grocery here, designed for maximum shopping convenience.

The ultra-modern brick market, operated by W. H. Bowen, is located in a suburban shopping area. The building measures 50 ft. by 100 ft. and, except for three supporting pillars, is completely open across the front.

Protecting the front is a large overhang which extends the full length of the building. This also gives shoppers added protection in going to and from their cars.

Large open entryways give plenty

of elbow room for shoppers coming and going even at peak rush hours. Convenient and attractive island displays are always kept fully stocked with a great variety of foodstuffs.

Frigidaire self-service and clerk service display cases provide refrigerated space for keeping perishables fresh and saleable. Each case or group of cases is surrounded by related food items and point-of-sale merchandise. The frozen food center is extremely popular, and Bowen states that another case will have to be installed to handle the demand for frozen foods.

The meat department, where all fresh meats are cut and processed for sale, is glass-enclosed and fronted by a 10-ft. self-serve delicatessen



MODERN FRONT ENTRANCE and parking area of Bowen's supermarket, drive-in grocery in Dallas. Four large open entryways keep customer traffic flowing freely even during peak rush hours.



ONE OF THE BUSIEST SPOTS in Bowen's supermarket is at this frozen food case. It is difficult to keep this case stocked because of the great customer demand for frozen foods.

case for cheeses and packaged cold meats and two 10-ft. double-duty clerk-service cases for a great variety of fresh cut meats, Bowen further indicated.

These cases act as a part of the

front wall of the meat process room and the two closed cases can easily be loaded at the rear from the processing room.

Special orders can be handled for customers through openings in the

glass over the cases, it is reported.

Two other 10-ft. self-service cases located on the opposite wall provide storage and display of dairy products and vegetables. As an added service, Bowen has provided a Frigidaire drinking water cooler for his customers refreshment while shopping.

Cabinet Space No Longer Big Factor In Chains' Taking Frozen Food Line

CHICAGO—The frozen food cabinet space problem is not so important to the chain store buyer as it is to some frozen food packers, Ralph W. Long, Jr. of *Quick Magazine* told the Eastern Frosted Foods Association during the Frozen Food Convention here recently.

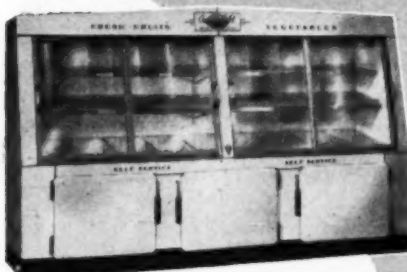
There are other more important factors in the chain store buyer's decision to take on or reject a brand of frozen foods, Long noted.

Price and quality are the most important factors to the buyer, a survey of chain store buyers by *Quick* and a frozen food trade publication revealed. Consumer demand for the item ranked third in his consideration.

On the other hand, price cutting was a top reason for eliminating a brand that had previously been selected, and lack of consumer interest was the second reason.

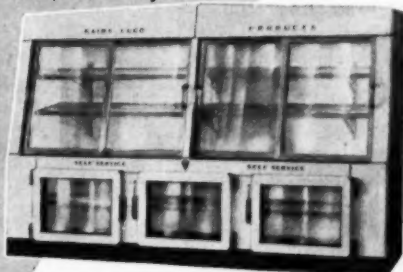
The publications' survey, which covered 131 chains, also indicated that frozen foods now account for 4.8% of their total store volume. Concentrates and vegetables account for 58% of the frozen foods sold, with 70% of these going to nationally advertised brands.

Here's a Pair of Profit Makers for You



Viking CC-120 CrispyCold . . . best seller for fruits and vegetables

Features Viking Dew-Mist Control . . . keeps produce fresher 3 to 5 times longer. Gives refrigeration plus high humidity . . . eliminates wasteful spoilage. The profit potential, attractive appearance, efficiency and economy of the CC-120 CrispyCold means that it sells itself to your customers. Available in 90 and 120 inch sizes.



Viking D-120 best seller for dairy products

Designed for maximum eye-appeal . . . buy-appeal. The Viking D-120 displays dairy items properly . . . invitingly . . . keeps them fresh, clean and protected. Controlled humidity saves merchandise . . . saves operating expense. The Viking D-120 has all the quality features that make all Viking Cases best sellers . . . for you and your customers. Available in 90 and 120 inch sizes.

Mail Coupon TODAY

To Sell More, Sell Viking! Inquire today about a Viking franchise.

SINCE 1904

VIKING REFRIGERATORS, INC.
7500 Wilson Ave., Kansas City 3, Mo.

Viking Refrigerators, Inc., 7500 Wilson Ave., Kansas City 3, Missouri

☐ Please send me complete information on Viking CC-120 CrispyCold and Viking D-120 best seller display cases.

☐ Tell me about the availability of Viking Franchises in my area.

Name _____

Firm _____

Address _____

City _____ State _____

FULL PAGE TWO-COLOR SATURDAY EVENING POST ADVERTISEMENT February 28, 1953

MAKE MONEY WHEREVER THERE ARE PEOPLE!

Mills Industries, Pioneer Builders of High Profit Ice Cream and Frozen Custard Freezers for over 30 years, announces the revolutionary

NEW Mills TWIN-HEAD

FROZEN CUSTARD FREEZER

Popular frozen custard and soft frozen ice cream made fresh and whole—some rights on the spot are astounding sales records every year. This tremendous surge in popularity adds vast extra profits to established businesses large and small. It provides exceptionally great money-making opportunities to those who want to get into their own business.

The new Mills Twin-Head Continuous Custard Freezer is easy to install, easy to operate, compact in size, low in cost. Floor and counter models are available. Clean, sanitary ultra-modern design. You serve magic two flavor operation builds enormous volume business. You make smooth, delicious soft ice cream for cones, malts, shakes and six modes right from the handy draw-off spigots. Users report profits of over 64 per cent.

Thousands of gratified Mills customers are making extraordinary profits year after year. We have actual profit figures proving how a Mills Freezer can make huge profits for YOU!

HERE'S WHAT A FEW PROUD OWNERS SAY!

From Tennessee—"Ordered my first Mills in June '50 and the second March '51—profits amazing!"

From Louisiana—"Made profits immediately."

From Michigan—"High quality, easy to operate at low cost."

From Kansas—"Many a dollar of profit for the very small investment."

From New York—"Excellent equipment complete plus fast service."

THESE REPRESENTATIVE COMPANIES CAN GIVE YOU FULL INFORMATION

(If no distributor listed below in your area, write Mills Industries direct.)

Ala. Birmingham, H.C. Maltby

Ark. Little Rock, J. H. Maltby

Calif. Los Angeles, J. H. Maltby

Colo. Denver, J. H. Maltby

Conn. Hartford, J. H. Maltby

Del. Philadelphia, J. H. Maltby

Fla. Miami, J. H. Maltby

Ill. Chicago, J. H. Maltby

Ind. Indianapolis, J. H. Maltby

Iowa. Des Moines, J. H. Maltby

Kan. Kansas City, J. H. Maltby

Mich. Detroit, J. H. Maltby

Minn. Minneapolis, J. H. Maltby

Mo. St. Louis, J. H. Maltby

Neb. Omaha, J. H. Maltby

N.J. Newark, J. H. Maltby

N.Y. New York, J. H. Maltby

Pa. Philadelphia, J. H. Maltby

R.I. Providence, J. H. Maltby

S.D. Sioux Falls, J. H. Maltby

Tenn. Nashville, J. H. Maltby

Tex. Dallas, J. H. Maltby

Va. Richmond, J. H. Maltby

Wash. Seattle, J. H. Maltby

Wis. Milwaukee, J. H. Maltby

Wyo. Cheyenne, J. H. Maltby

Ala. Birmingham, J. H. Maltby

Ark. Little Rock, J. H. Maltby

Calif. Los Angeles, J. H. Maltby

Colo. Denver, J. H. Maltby

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Iowa. Des Moines, J. H. Maltby

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Mich. Detroit, J. H. Maltby

Minn. Minneapolis, J. H. Maltby

Mo. St. Louis, J. H. Maltby

Neb. Omaha, J. H. Maltby

N.J. Newark, J. H. Maltby

N.Y. New York, J. H. Maltby

Pa. Philadelphia, J. H. Maltby

R.I. Providence, J. H. Maltby

S.D. Sioux Falls, J. H. Maltby

Tenn. Nashville, J. H. Maltby

Tex. Dallas, J. H. Maltby

Va. Richmond, J. H. Maltby

Wash. Seattle, J. H. Maltby

Wis. Milwaukee, J. H. Maltby

Wyo. Cheyenne, J. H. Maltby

MILLS INDUSTRIES, INCORPORATED

4144 FULLERTON AVENUE CHICAGO 39, ILLINOIS

MORE Active

DISTRIBUTORS WANTED

to Cash in on National Advertising

Highly profitable territories are open to you active, reputable, profit-minded distributors! Mills vast profit potentials will stagger your imagination! Only good, active distributors can get and keep this valuable franchise!

The distributors we want are 12 months a year men — willing and able to cooperate with us and take advantage of Mills National Advertising. You don't have to be big, but you have to be active. Small distributors can, and have grown big with Mills National Advertising.

There is an exceptional and unusual opportunity

to join the oldest manufacturer of high profit Continuous Counter Freezers in the world. Advantages are many. Mills Freezers are in a class by themselves — in profit making, modern beauty, ease and economy of operation, quality, and at prices no higher than are being paid for inferior equipment. Your customers are shown huge, immediate profits that pay for their Mills Freezers in almost no time. You are backed by national advertising in both consumer and trade publications. Write Mills Freezer Division now for specific distributorship details.

MILLS INDUSTRIES, INCORPORATED, 4144 FULLERTON AVE., CHICAGO 39, ILLINOIS

Detroit Commercial Sales

Refrigeration Contractors Installed 1,534 Condensing Units In 1952;
129 Firms Make Installations In 1,008 Establishments

DETROIT—Refrigeration contractors here sold or installed 1,534 condensing units during 1952 for commercial applications within the Detroit city limits.

The figure was determined by AIR CONDITIONING & REFRIGERATION NEWS in its annual check of installation permits issued by the city's Department of Buildings and Safety Engineering.

Because the permits in question are issued only for installations within the city limits and do not cover those in the surrounding suburbs, the data presented here is not complete for the Detroit metropolitan area. In all probability, however, these figures represent the great majority of the installations made in the over-all Detroit area.

The 1952 total of 1,534 is a drop of 262 units from the previous year's total of 1,796. As the accompanying tables show, last year's figures also represent a downward trend from the 2,086 installed in 1949 and the 1,982 which went in during 1950.

The data presented herewith in tabular form compares the installations by size for the years 1949 through 1952; monthly sales by size for 1952; installations by make of condensing unit for 1950, 1951, and 1952; how the installations were spread among the 129 contractors involved, and where the units were installed during 1951 and 1952.

More 1/2-hp. condensing units were installed during 1952 than any other size, the figures show, 318 compared with 284 1/2-hp. units, 275 3/4-hp. machines, and 240 1-hp. units. In the preceding year, the 1/2-hp. size was the leader with 337 compared with 323 1-hp. units and 320 3/4-hp. machines.

In two size classifications 1952 installations were ahead of 1951, a total of 318 1/2-hp. units being installed during 1952 as compared with 302 the previous year, and 136 2-hp. machines as against 130 in 1951.

The other size groups were off varying amounts from the 1951 totals.

4 100-Hp. and 1 200-Hp. Machine Included

A respectable number of machines over 5 hp. were installed during 1952, however. The year's total of 46 in this classification included such large units as four 100-hp. machines and a single 200-hp. unit.

The analysis of sales by month for 1952 shows that August was the largest with 157 units installed while December, as usual, was low, this time with 75 units.

The exceptionally hot weather experienced by Detroit and most of the nation last summer might, strangely enough, have had a direct bearing on the fact that sales during this period

were somewhat lower than normal.

April installations were a very encouraging 205; May sales dropped to 140; June, 95; July, 153; August, 157; and September, 81.

Although the hot weather did result in the replacement of some old machines which "conked out" under the extreme, continuous load, the heat wave also had service and installation crews working at full speed to keep present customers' equipment operating. With available manpower being limited by these circumstances it is not unlikely there was less time than normal for new installations.

It is difficult to explain otherwise the exceptionally low records for June and September of last year.

In the table which compares the installations by make of compressor, it will be observed that the first four makes ("A" through "D") in 1952 maintained the same relative positions they held in 1951.

"A" and "B," however, were down somewhat from their 1951 totals—251 and 216 compared with 302 and 245 in 1951, respectively. Makes "C" and "D," though, sold more units in 1952 than in 1951, "C" making a sizeable jump from 159 to 195, while "D" was up to 124 from the previous year's 119.

A sharp gain was also registered by "E," whose 122 units in 1952 represent a 33% increase over the 92 units installed in 1951, and a



1952 Detroit Commercial Installations by Size by Month

Month	1/2-hp.	3/4	1	1 1/2	2	3	5	Over 5*	Total
January	16	21	25	14	13	10	3	1	106
February	15	26	20	18	13	21	7	5	125
March	33	32	28	18	8	3	5	4	131
April	62	30	33	27	16	15	14	5	205
May	22	47	15	25	11	10	3	4	140
June	25	24	21	12	3	3	1	1	95
July	30	21	16	28	10	29	12	4	153
August	14	33	31	23	16	12	17	2	157
September	21	18	7	14	5	7	3	3	81
October	21	32	34	22	28	11	1	1	150
November	17	20	29	24	7	4	6	3	116
December	8	14	16	15	5	11	6	1	75
Total	284	318	275	240	135	136	77	23	1,534

*Includes five 7 1/2-hp. machines, 11 10's, five 15's, four 20's, five 25's, six 30's, one 35, two 50's, one 60, one 75, four 100's, and one 200-hp. compressor.

slight gain over the 116 units of 1950.

Percentagewise, the largest gain by any make was chalked up by "M," whose installations increased from nine in 1951 to 32 in 1952.

In all, eight makes sold more units in 1952 than they did the preceding year.

129 Firms Made the Installations

The breakdown of contractors shows that the 1,534 units were installed by 129 different firms during 1952. This is approximately the same number—134—that shared the 1,796 installations in 1951. In the year 1950 there was a total of 137 firms installing 1,982 units.

Volume produced by each contractor during 1952 ranged all the

way from "A," who installed 144 units for 9.4% of the total, to the 27 firms who installed one unit apiece.

Second place in the 1952 compilation went to Contractor "B" whose 111 units represented 7.2% of the total; "C" was third with 66 units for 4.3%; "D" was fourth with 65 units or 4.2%; "E" was fifth with 57 or 3.7%; "F" was sixth with 51 or 3.3%.

In 1952 there wasn't quite the spread between the top two contractors as in the previous year. The 1951 figures, published in the April 28, 1952 issue of AIR CONDITIONING & REFRIGERATION NEWS, showed that the top contractor installed 12.5% of the units while the second firm put in 5.1%, a difference of 7.4% separating the two.

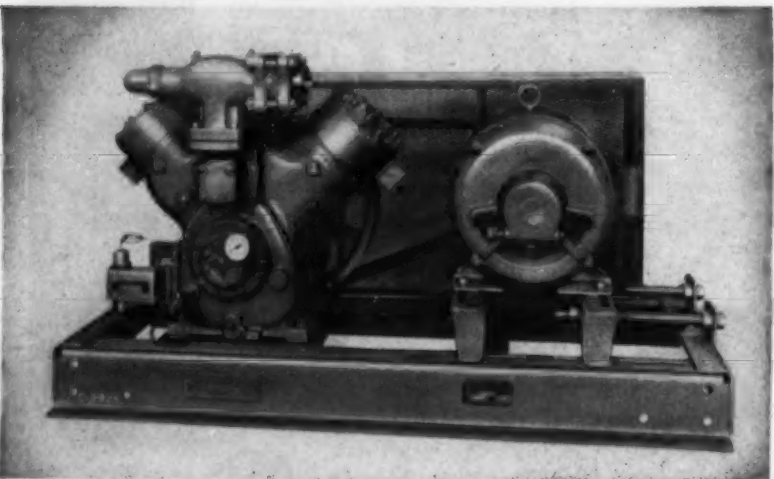
A mere 2.2% separates the top two (Concluded on next page)

Where Commercial Refrigeration Units Were Installed In Detroit In 1951 and 1952

Establishment	—1951—		—1952—	
	No.	Units	No.	Units
Advertising agency	1	1	6	8
Apartment house	5	7	37	40
Bakery and bakery shop	22	23	1	1
Banana storage	1	1	2	4
Bank	2	10	2	2
Beer store	17	21	5	9
Blood bank	1	1	3	6
Bottling plant	1	1	1	1
Bowling alley	4	6	2	4
Brewery	3	3	2	2
Cafeteria	8	12	5	9
Caterer	3	8	3	6
Cemetery	1	1	1	1
Club	11	15	7	8
CO ₂ charging system	1	1	2	2
Confectionery	11	15	6	6
Convalescent home	1	1	1	1
Dairy	11	14	16	21
Dairy bar	18	40	26	41
Dance hall	1	1	1	5
Department store	7	18	9	14
Drug manufacturing	6	7	4	6
Drugstore	15	21	12	21
Drug wholesaler	1	1	1	1
Egg storage	3	5	1	1
Electroplating shop	1	1	1	1
Factory	14	40	15	22
Fish market	5	5	4	5
Fish wholesaler	1	1	1	1
Florist	19	20	30	32
Food processing	3	4	1	2
Food store	486	801	492	733
Food wholesaler	10	17	8	14
Frog market	1	1	1	1
Fur vault	1	1	1	1
Golf club	2	7	1	1
Greenhouse	1	1	1	1
Hall	10	20	5	8
Hospital	68	228	29	150
Hotel	8	17	5	24
Ice plant	1	1	1	1
Ice vendor	2	2	3	3
Institution	3	4	1	1
Jail	1	2	1	1
Laboratory	4	6	1	3
Meat packer	5	9	9	12
Museum	1	1	1	1
Newspaper	1	1	1	1
Office	1	1	3	4
Poultry market	14	16	4	4
Restaurant	136	162	109	125
Sausage manufacturing	3	5	2	2
School	3	3	1	2
Stadium	1	2	1	13
Storage	1	2	1	1
Store (unspecified)	13	13	1	1
Tavern	129	148	95	116
Telephone exchange	1	1	3	6
Theater	16	16	8	9
Trucks, refrigerated	3	3	1	2
Utility office	1	1	1	1
Unknown	1	1	2	2
Warehouse, cold storage	6	7	1	1
Total	1,123	1,796	1,008	1,534



HANDSOME WORTHINGTON PACKAGED AIR CONDITIONERS are available in a complete size range from 3 to 15 hp for installation in homes, offices, restaurants and stores. (Package units for remote installation are also available in 15, 20 and 25 hp sizes.)



WORTHINGTON'S NEW "J" FREON COMPRESSOR, designed to run at optimum speed, combines all the advantages of high and low speed machines. Electric unloading, improved internal manifolding and a new force-feed lubrication system are just three of the many advancements in functional design incorporated in the "J" compressor.

Why is Worthington the fastest-growing name in air conditioning and refrigeration?

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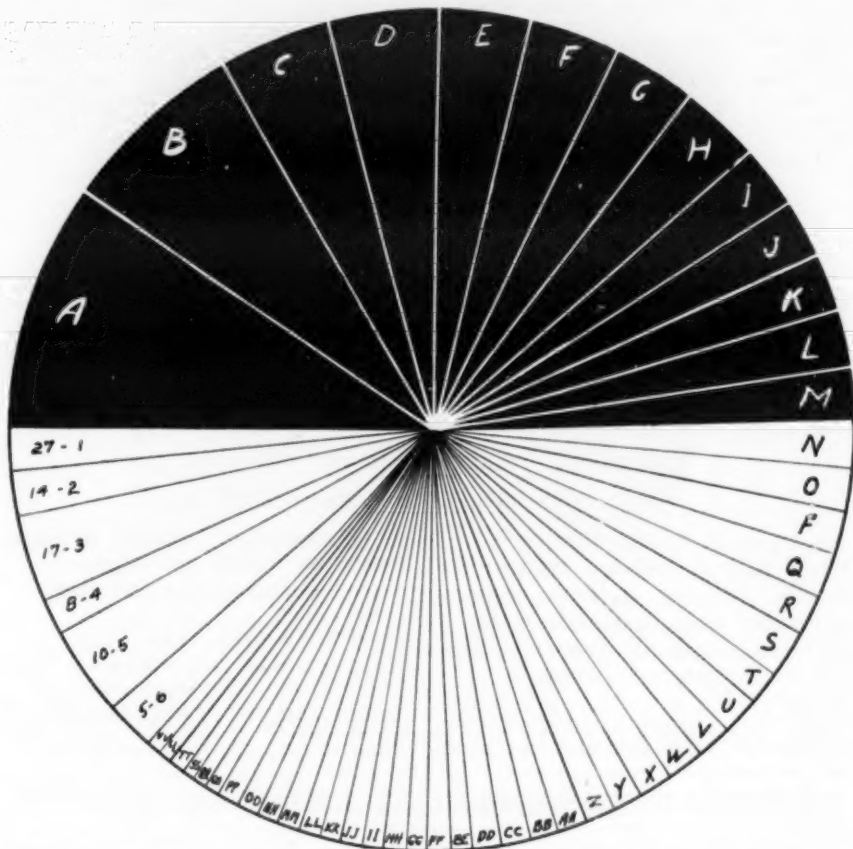
Worthington Corporation, Air Conditioning and Refrigeration Division, Harrison, New Jersey. A.3.9



THE NEW WORTHINGTON WINDOW AIR-CONDITIONER is the talk of the industry. Acclaimed by leading interior decorators, this beautiful unit is the ultimate in home air-conditioning. And for use with any type of central heating system, Worthington residential air conditioning is available in sizes of 3 and 5 hp.



The Best Franchise . . . The Most Complete Line



DETROIT commercial condensing unit installations in 1952 followed the usual pattern of the top 10% of the contractors ("A" through "M") installing half of the units. Installations by the remaining 90% (116 firms) varied all the way from 29 units by "N" to 27 firms who installed one unit apiece.

Detroit Commercial Sales --

(Concluded from preceding page)
firms in 1952. In 1950 the difference between the two top firms was 4.7% —9.8% for contractor "A" compared with 5.1% for contractor "B." Although the top contractor was down considerably in 1952 from his previous year's record, the same overall pattern of a few firms getting the larger share of the jobs continued.

This meant that in 1952 the top 13 contractors, representing 10% of the 129 firms listed on the permits for the year, installed 49.5% of the total units that went in.

In 1951 the top 14 contractors (10.4% of the total) installed 50.8% of the units while in 1950 the top 14 firms (10.2% of the total) handled 51.4% of the total units installed.

Similarly, at the low end of the scale, in 1952 a total of 76 contractors, representing 59% of those active during the year, installed an aggregate of only 12.3% of the total units.

This is consistent with the data that has been tabulated from 1946 onwards.

Final tabulation shows where commercial refrigeration units were installed during 1951 and 1952, giving the number of establishments and

How Contractors Shared 1952 Installations

Contractor	No. Units	%
A	144	9.4
B	111	7.2
C	66	4.3
D	65	4.2
E	57	3.7
F	51	3.3
G	50	3.3
H	48	3.1
I	39	2.5
J	33	2.2
K	33	2.2
L	32	2.1
M	30	2.0
N	29	1.9
O	28	1.8
P	28	1.8
Q	28	1.8
R	27	1.8
S	25	1.6
T	23	1.5
U	22	1.4
V	22	1.4
W	21	1.4
X	20	1.3
Y	19	1.2
Z	18	1.2
AA	15	1.0
BB	15	1.0
CC	15	1.0
DD	15	1.0
EE	14	.9
FF	14	.9
GG	13	.8
HH	13	.8
II	12	.7
JJ	12	.7
KK	10	.7
LL	10	.7
MM	10	.7
NN	10	.7
OO	10	.7
PP	10	.7
QQ	9	.6
RR	8	.5
SS	8	.5
TT	8	.5
UU	8	.5
VV	8	.5
9 installed	6 ea.	30 2.0
10 installed	5 ea.	50 3.3
8 installed	4 ea.	32 2.1
17 installed	3 ea.	51 3.3
14 installed	2 ea.	28 1.8
27 installed	1 ea.	27 1.8
Total	129	1,534 100.0

the total number of units in each category.

During 1952 the 1,534 commercial condensing units were installed in 1,008 different establishments, compared with the 1951 figures of 1,796 units placed in 1,123 establishments.

Food Stores Bought Most Units

Food stores were far ahead of any other category in 1952, as usual. During that year 733 units were installed in 492 such stores. During 1951 a total of 801 units were installed in 486 food stores.

In terms of units, second largest class of buyer in 1952 was the hospital. A total of 150 units were installed in 29 hospitals during the 12-month period. It should be pointed out, however, that the figure for this group is all-inclusive because the city requires a permit for every piece of refrigeration equipment installed in a hospital. This requirement hits some other types of occupancies, too, however.

Next in listing for 1952 as purchasers of units were restaurants, 109 having purchased 125 condensing units. Taverns followed closely, 95 having installed 116 units.

Other sizeable buyers in 1952 included 37 bakeries and bakery shops buying 40 units; 22 beer stores with 25 units; 16 dairies with 21 units; 26 dairy bars with 41 units; 12 drug-stores with 21 units; 15 factories with 22 units (several of these were low temperature cabinets); and 30 florists with 32 units.

A careful study of the whole list of establishments which had commercial refrigeration equipment installed in 1951 and/or 1952 indicates the very broad range of prospects for various types of commercial refrigeration equipment.

Sales for Past 4 Years Compared by Size

Size in Hp.	1949	1950	1951	1952
1/4	353	295	337	284
1/2	388	402	302	318
3/4	423	369	320	275
1	407	343	323	240
1 1/4	205	184	150	135
2	126	167	130	136
3	87	127	124	77
5	39	40	53	23
Over 5	58	55	57	46
Total	2,086	1,982	1,796	1,534

Unit Installations by Make For Past 3 Years

1952 Rank	1950 Units	1951 Units	1952 Units
A	292	302	251
B	411	245	216
C	152	159	195
D	128	119	124
E	116	92	122
F	130	109	88
G	60	72	80
H	139	87	79
I	115	93	71
J	43	101	60
K	48	62	43
L	39	61	38
M	21	9	32
N	17	79	32
O	17	12	14
P	125	80	12
Q	16	11	12
R	11	13	11
S	24	9	11
T	23	13	9
U	*	7	3
V	*	17	2
W	*	20	1
Others	51	24	28
Total	1,982	1,796	1,534

*Included in "Others."

Edmondson Heads New Schnacke Office In N. Y.

EVANSVILLE, Ind. — The volume of business in the New York territory has necessitated the establishment of an office at 550 Fifth Ave., New York City, in charge of Homer Edmondson, according to F. C. Schnacke, president of Schnacke, Inc. here.

Edmondson is an engineering graduate of West Virginia university and has had considerable experience in engineering and air conditioning fields. His previous connection was with York in a sales engineering capacity.

Trane Co. Assigns Ender To Products Engineering

LA CROSSE, Wis. — Wyman K. Ender recently joined the products engineering department of the Trane Co., it was announced by R. E. Lucey, vice president.

Ender will work on development of the Trane hermetic centrifugal refrigeration units—the "CentraVac" water chillers.

Before joining Trane, he was associated with Douglas Aircraft Co. at El Segundo, Calif. With his graduate work in air conditioning and refrigeration, Ender received a masters degree in mechanical engineering from the University of Illinois.

Pinnacle Self Service DAIRY and BEVERAGE REFRIGERATORS



HERE ARE THREE SHELVES OF "SELF SERVICE SELLING" IN THE FLOOR SPACE OF ONE!

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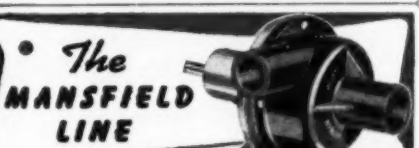
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TINY NEW CENTRIFUGAL PUMPS!

Serving wide range of applications. Liquid transfer, machine tool coolant, plating baths, air conditioning, chemical handling, abrasive solutions, domestic and commercial appliances.

Built on pedestal for belt drive as shown, also close coupled to electric motor. Materials vary with pump use - synthetic rubber bodies, stainless steel shafts are standard.

Engineering assistance on O.E.M. applications. Inquiries invited.

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Have You READ 'Peace and Progress' Yet?



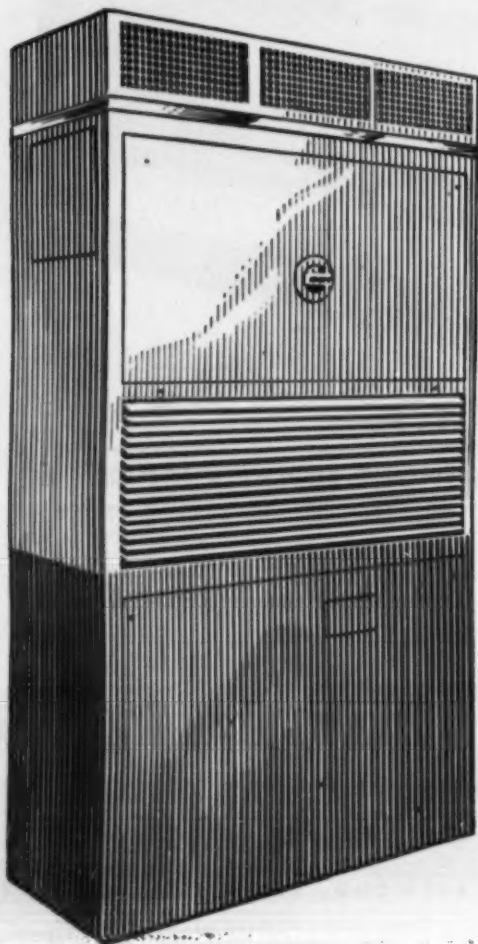
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- Precision manufacturing and assembly in an air conditioned factory assure long life—low maintenance—high efficiency.
- Best proof of all—no major design change has been necessary since 1937. Chrysler Airtemp sells more "packaged" air conditioners because they're the best!

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AC&RN-9-53

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VOLUME 68, No. 11, SERIAL No. 1,252, MARCH 16, 1953

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Worth Reading

I have learned silence from the talkative, tolerance from the intolerant, and kindness from the unkind; yet strange, I am ungrateful to these teachers.—KAHLIL GIBRAN.

There is no scientific way of bringing up a child, and there never will be. Where the deepest, most precious part of your child is concerned, science is and always will be an outsider.—*Better Homes and Gardens*.

Strange as it may seem, one of the elements of success is dissatisfaction; not the kind that produces grumbling, complaining and bickering, but instead the kind that caused the Pilgrims to set sail for a new land with the determination to secure for themselves liberty in every sense of the word.—*Elevations*.

Character is 24 carat. Reputation may be but the tinsel.—*Philnews*.

Communist is a fellow who likes what he doesn't have so well he wants you not to have it either.—*Grayson (Ky.) Enquirer*.

The education and knowledge one acquires is of much higher value than gold, since you can be deprived or cheated of gold, but never of knowledge.—*F. A. VIDER*.

The best kind of leadership is that which produces fellowship.—*Christian Advocate*.

Worry is a thin stream of fear trickling through the mind. If encouraged, it cuts a channel into which all other thoughts are drained.—*ARTHUR SOMERS ROCHE*.

If you worry about what other people think of you, it means you have more confidence in their opinions than in your own.

One of the greatest delusions in the world is the hope that the evils of this world can be cured by legislation.—*Royle Forum*.

Like a mistreated horse who finally accepts his beating quietly, we have become accustomed to giving up a good part of our income in taxes both direct and indirect.—*THOS. R. JONES*.

The theologian is right. Why not admit it? More than anything, the world needs Love.—*SEBASTIAN DE GRAZIA*.

It seems so easy to be good-natured, I wonder anyone takes the trouble to be anything else.—*DOUGLAS JERROLD*.

Too many people expect to find 100% Men. And when they fail in their search for such nearly impossible ones they lose a good deal of their faith in human nature. There are no perfect people.—*Educational Forum*.

We doubt if there is much to be gained by engaging in argument, for you cannot take an idea out of a man's mind. The best you can hope to do is to put another idea into his mind and, eventually, you both may come to agreement.—*P. K. Sideline*.

Believe in yourself, and what others think won't matter.—*EMERSON*.



LOW TEMPERATURE greases for aircraft will be tested in this industrial chiller made by Conrad Industrial Coolers, Holland, Mich. Unit using "Freon-13" can pull temperatures down to -100° F.

Chiller Which Reaches -100° F. Developed for Gulf Research To Test Low Temp. Greases

PITTSBURGH — An industrial chiller that will produce temperatures from room level down to -100° F. has been made for the Gulf Research Laboratory here by Conrad Industrial Coolers of Holland, Mich.

The cabinet is being used for research development of low temperature greases for aircraft.

It has been found that with airplanes flying at high altitudes and with their equipment subject to severe arctic temperatures, lubrication is a very serious problem. This applies to large parts such as engines as well as small parts, such as automatic pilots and other operational units.

With the installation of this cabinet, the laboratory can now reproduce low temperature conditions so that lubricants that will perform satisfactorily under these conditions can be developed. By using the specified lubricants, air crews will be assured that these critical parts will perform properly in ultracold weather.

The Conrad cabinet has a stainless steel interior that measures 40 in. long, 20 in. wide, and 22 in. deep. The lid is counterbalanced with

spring loaded hinges and has four plastic conduit ports through it for insertion of test instruments and turning devices. Forced air circulation is provided inside the cabinet by an externally mounted motor with rubber propeller-type fan blade.

The temperature is recorded on an electrically driven 6-in. dial recorder chart mounted on the front exterior of the cabinet.

Insulation on this cabinet is vapor-proof expanded plastic, rigid and non-settling. This is set into the cabinet and sealed with hydrolene. There are no wood frames and the entire shell is formed and welded.

The compressors are semi-sealed Copeland units. There are two independent refrigeration circuits, a "Freon-13" system for the low temperature cooling and a "Freon-22" system for condensing the "Freon-13" in the cascade condenser.

The refrigeration system is of special design that requires no solenoid valves, no pump down during idle periods, and has a built-in expansion chamber for the "Freon-13." Thus internal pressures are held to a maximum of 185 lbs. even with all the refrigerant pumped down, as

it may be at some time.

Standby idle pressures will be approximately 120 lbs. pressure, even with the cabinet at 70° F. There is also a safety relief to purge off any excess gas in the event that an overcharge is put into the machine.

All parts, expansion valves, and sub-assemblies are stock items. Thus exchange parts are available from any refrigeration wholesaler.

The cover of the machine compartment, which is mounted at one end of the cabinet, has large removable side panels. If necessary, the entire cover can be slid off. The machine is entirely self contained, needing only connection of power and water.

Libbey-Owens-Ford Adds 2 Fiber Glass Distributors

TOLEDO—Appointment of Arrowhead Steel Distributors, Inc. of Duluth and Burroughs Glass Co. of St. Louis as distributors of its fiber glass insulation has been announced by Libbey-Owens-Ford Glass Co. here.

The Duluth distributor will handle LOF fiber glass products in northern Minnesota, northern Wisconsin, upper peninsula of Michigan, and North and South Dakota.

Although formed in 1949, the Arrowhead Steel Distributors, Inc., have a group of officers with more than 60 years combined business experience in Duluth. Allan F. Zalk is president; Lawrence Cowan, vice president, and Charles L. Zalk is secretary-treasurer. B. B. Magee, Jr. is general manager and sales director.

H. H. Piou, president of Burroughs, also announced that the Burroughs organization has acquired an additional warehouse at 1039 Grand Ave.



Freeze-Drying Cabinet Has Push-Button Control

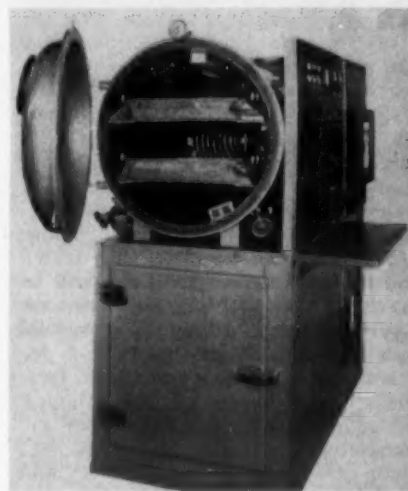
PHILADELPHIA — "Push-button" automatic control of freeze-drying is provided in a new model package unit now being distributed by Proctor & Schwartz, Inc. here and made by Dry-Freeze Corp. of Chicago.

As in previous models, the unit dries biologicals or other products that would be harmed by excessive heat with a combination of infrared radiation and vacuum which drive out moisture in the vapor form which is immediately collected as frost on a coil held as low as -70° F.

With the new pushbutton controls, the cylindrical drying chamber can be loaded and a switch thrown to let the unit operate automatically.

A series of five stages of drying may be set on a time basis with temperature limits for each step for production drying. Signal lights will indicate how far drying has progressed. An alarm bell will ring if the infrared radiation has been automatically shut off because the temperature has exceeded the desired minimum. In addition, a strip chart recorder provides a permanent record of each load.

For experimental drying modulated



control of radiation is provided, but manual control switches are also available.

Self-contained refrigeration system includes a two-stage "Freon-22" compressor that also handles a sizeable -70° F. freezer cabinet below the drying chamber. This cabinet can be used for freezing and storage of materials prior to drying in the cylindrical chamber which is located above.

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★ Displacement, 8 cubic in. Develops 2½ h.p. @ 3600 r.p.m. Torque at moderate speeds is exceptionally high, assuring high lugging capacity. Well suited to the requirements of refrigeration and air conditioning equipment, by reason of its power, dependability and servicing ease. Shown equipped with exclusive Contex external breaker point and fly-weight type governor assembly. This Continental "First" has been widely acclaimed as the most important air-cooled engine advance in years.

The Continental Red Seal air-cooled industrial engine line comprises 14 models, from ¾ to 2½ h.p., including six vertical shaft models—three for belt drive and three for direct.

Continental Motors Corporation

AIR-COOLED INDUSTRIAL ENGINE DIVISION

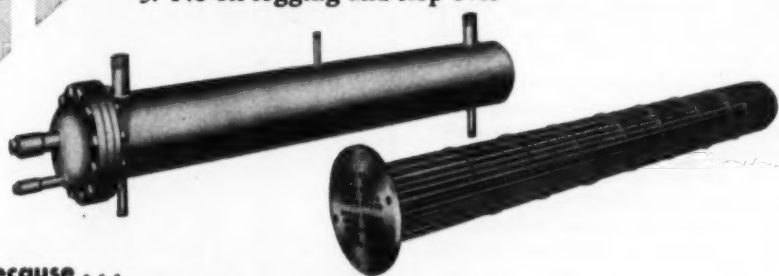
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Carry all incoming liquid to the top of the Chiller in the first pass. Provide constant forward movement of all refrigerant and oil. Prevent accumulation of liquid (refrigerant or oil) in any part of the Chiller.

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137 SOUTH STREET PROVIDENCE 3, R. I.

Air Conditioning & The Builder (2)

An Outline of the Principal Types of Systems
Now Available for Residential Air Conditioning

By S. J. Levine, Air Conditioning Div., General Electric Co.

Since the performance requirements for residential year-round air conditioning are different than for commercial or industrial applications of air conditioning, we are now experiencing the appearance of new and special equipment for residential year-round air conditioning.

Because of the growing demand for warm air heating in modern homes, with its features of filtering, humidifying, and air circulation, it was natural that many manufacturers should develop their cooling products to fit in with this trend, and so most of my discussion will be in connection with cool air devices. Equipment for cooling using special radiation is also produced.

More recent to the field of residential year-round air conditioning is the heat pump which does the job completely by electricity. The heat pump is a huge refrigerator and operates on the same principle as a refrigerator.

In the summer, the refrigerant picks up heat from the indoor air as it passes through the unit, delivering cool conditioned air back into the room, but in the winter by reversing the refrigeration cycle, it picks up heat from outdoor air, city water, well water, or ground coils, and discharges this heat into the house.

Fig. 1 shows a typical example of an air-to-air heat pump. This unit is the 5-ton size, weighing 1,500 lbs.,

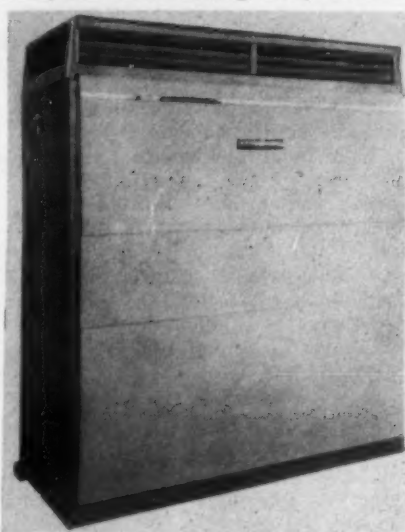


FIG. 1—Air-to-air "heat pump" air conditioner for residences, providing both heating and cooling by means of an electrically driven refrigeration compression system.

and stands 73 in. high, 71 in. wide, and 28½ in. deep. This represents 14.1 sq. ft. of floor space. This manufacturer also has a 3-hp. size in regular production.

In summer its operating cost is comparable to other refrigeration or cooling units. In winter its operating cost, compared to other equipment using solid, liquid, or gaseous fuels,

will be entirely dependent on the cost of electric power, and will, in general, cost about one third as much as straight electric resistance heating—in some areas about the same cost as gas or oil, some higher, some lower.

A heat pump using water as its winter heat source will be physically smaller, but requires a water source, a well, or similar. One of the important advantages of an air-to-air pump is the universal availability of air.

Although the heat pump just described is air cooled in the summer, you will find that practically all other types of year-round air conditioners are water cooled. Thus, in areas where water is expensive or its use restricted, a water-saving device of some type will be required.

A common device is a cooling tower which allows about 95% saving of water through evaporative cooling and reuse of the water. There are two common types of cooling towers, gravity and forced.

A gravity cooling tower must be located outdoors and since it relies on natural convection, must not be shielded by buildings or shrubs so that air movement is impeded. Capacity of the cooling tower would be reduced because cooling effect comes from the air passing through. Roof installations are quite common, and if planned in advance, can be given

AIR CONDITIONING (Year-Round Residential)

At the National Association of Home Builders annual convention, a presentation on year-round residential air conditioning systems was prepared under the auspices of the Air Conditioning & Refrigerating Machinery Association, with various aspects of the subject discussed by A. E. Meling, Carrier Corp.; S. J. Levine, General Electric Co.; J. A. Gilbreath, Servel, Inc.; and Keith T. Davis, Bryant Div. of Affiliated Gas Equipment Co.

Because this presentation offered so much good information about the fundamentals of year-round residential air conditioning—what it is and how it works,

and what builders can do in terms of changing new home design to lower building costs, the NEWS is publishing the discussions. First instalment, covering the discussion by Meling, was published in the March 2 issue.

This second instalment, covering the discussion by Levine, describes the general types of equipment that have thus far been made available for residential air conditioning applications. The speaker used more photographs and drawings than are presented here, but the ones shown here were selected as best illustrating the various types of equipment.

architectural consideration that is hidden, yet effective.

The forced draft cooling tower, unlike a gravity cooling tower, may be concealed outdoors, or may be placed in the basement or attic space connected with ductwork to outdoors. There are many variations, such as blow through or draw through, pro-

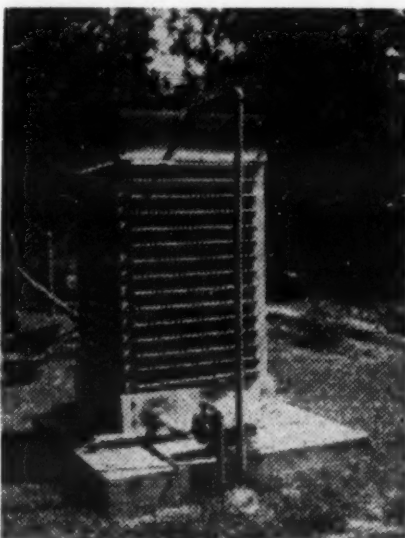


FIG. 2—Cooling tower for a residential job, installed in the yard.

pelleror centrifugal fan type, but all are the same in general principle.

A spray pond is sometimes used instead of a tower and this may take the form of a decorative fountain. This type may be considerably more expensive, and is not as generally used in building projects.

Other water-saving devices are air-cooled condensers and evaporative condensers. These devices require breaking into the refrigeration lines by the installer. This requires specially trained personnel familiar with refrigeration systems, and tends to nullify one of the benefits of buying a completely packaged unit from the manufacturer.

Having discussed several water saving devices, let's take a look at the combination systems using water.

Fig. 3 is a schematic drawing of a complete year-round air conditioner, consisting of an indirect steam heating system, an absorption refrigeration unit, an air filtering section, and a centrifugal fan section. Either gas or oil is used as a fuel for winter operation and as a source of energy for operation.

During the winter cycle, steam is delivered to a heating coil ahead of the fan section, while during the summer cycle steam is delivered to the absorption refrigeration unit.

Interesting points with regard to the refrigeration cycle in this unit are that there are no moving parts, and water is the refrigerant which

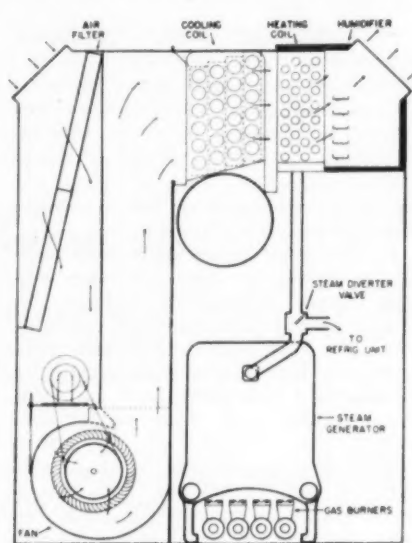


FIG. 3—Schematic diagram of year-round gas-operated absorption type residential air conditioning system.

vaporizes at very low pressure to pick up the heat and carry it to the condenser where the heat is expelled.

This system is controlled by a single device which consists of a modulating, two-step thermostat and manual switches.

The unit in Fig. 4 has a cooling rating of 3.3 tons and a heating output of 96,000 B.t.u. per hour. The weight of the gas fired units is approximately 1,725 lbs., while the oil fired unit is 1,975 lbs.

The units stand 51 in. deep, 51½ in. wide, and 73½ in. high, and the required floor space is 18.2 sq. ft., with the manufacturer's recommendation.

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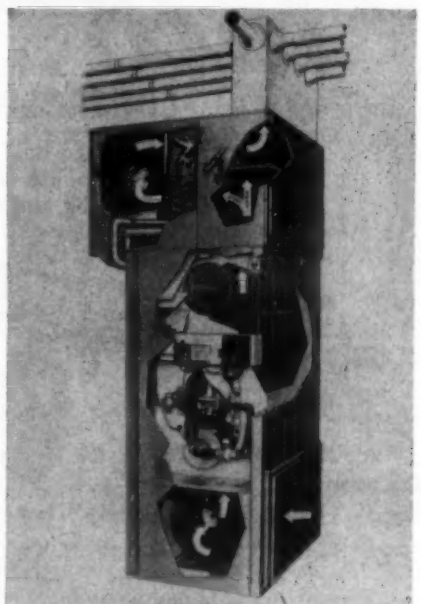
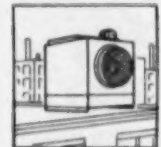


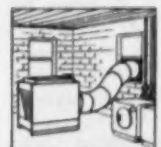
FIG. 4—"Heater-cooler" unit for residences, with heating system, blowers, and cooling coils in the "package" shown here, but with the condensing unit remotely installed.



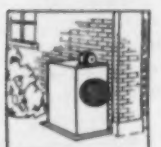
1953 Marley Aquatowers* lead all the way



ON THE ROOF



INDOORS



ON THE GROUND

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Right down the line—in design, construction, performance, availability—Marley Aquatowers continue to be the best buy for water cooling in the 2- to 60-ton range, as they have been for more than a decade.

To the carefully engineered design that has made Aquatowers the most popular of all cooling units, new important refinements have been added. Your Marley representative will gladly explain these improvements that assure even greater acceptance for Aquatowers.

Structural ruggedness is characteristic of the line. All are of heavy gauge steel, welded into perfectly integrated units. Interiors are completely protected by a heavy coat of Marmastic compound.

These well-designed, well-built towers are conservatively rated. They will deliver specified performance . . . are guaranteed to do it. This means that you can select the correct unit for each job. You don't over-buy or overload when you install Aquatowers.

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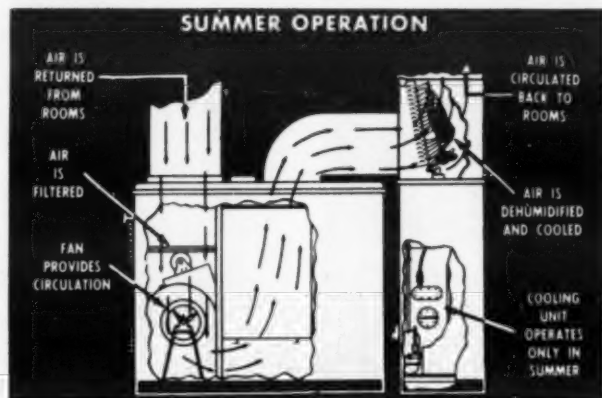


FIG. 5—Type of equipment that has been widely used ever since air conditioning contractors first started to make comfort cooling installations in residences. Equipment consists of a condensing unit and coil package connected to the supply duct of the furnace by a short duct, or with the coil section placed in the supply duct. The furnace filter and blower are used during both the heating and cooling cycle.

Residential Air Conditioning Systems--

(Concluded from preceding page)
tion calling for a 6 by 8-ft. room with a large double door.

Other ratings available are 5.4 tons cooling with either 120,000 B.t.u. per hour or 180,000 B.t.u. heating, and a 2-ton air conditioner and a heat capacity of 72,000 B.t.u. output.

The heat pump is the all electric unit. The absorption unit is primarily an all gas or all oil unit, electric power being needed, of course, for blowers and controls. Then there are the combination units—oil or gas fired for heating; electric refrigeration for cooling.

With Remote Compressor

Fig. 4 shows a "heater-cooler" unit which uses a remote or separate condensing unit. With this type equipment, the standard location of the cooling coil assembly is on top of the heating unit. Again this may be either an oil or gas fired unit so that on the cooling cycle, the air passes through both the heating unit and the cooling coil.

Since the condensing unit is separate, it may be located wherever convenient, but the installer must do the refrigerant piping to connect the two components.

Common practice in the past—and no doubt you have all seen examples—has been to build up a year-round system by using separate cooling and heating units or parts, often of dif-

ferent manufacture. Major disadvantages of such procedure are divided product responsibility, generally greater space required, and lack of uniform appearance.

For nearly 15 years, the type equipment shown in Fig. 5 has been employed in residential applications. The equipment required consists of a condensing unit cooling coil package, connected to the supply of the furnace through a short duct connection. The furnace filter and blower are used during both the heating and cooling cycle.

An interlocking thermostat is provided to avoid adjustments by the homeowner that could cause the use of heating and cooling at the same time. A 3-ton unit in this style made by one manufacturer is 59 in. high, 35 in. wide, and 19 $\frac{3}{16}$ in. deep, and the furnace is 52 $\frac{1}{2}$ in. high, 60 in. deep, and 28 in. wide. Total floor area required is about 16.7 sq. ft., not counting the space shown between units for service accessibility.

The 'Two Package' Type

The air conditioning equipment shown in Fig. 6 consists of two packages, one containing two or three one-ton refrigeration circuits, depending on the capacity of the unit, and the other, the heating unit and blower assembly which match the cooling unit in appearance. As can be seen from the picture air passes through both systems on the cooling cycle, and by-passes the cooling coils on the heating cycle.

The refrigerant circuits are controlled by a two-step thermostat, the bulb of which is located in the return air stream. The 3-ton cooling unit is 34 $\frac{1}{4}$ in. wide, 55 $\frac{1}{2}$ in. high, and 45 $\frac{1}{4}$ in. deep and weighs 650 lbs. The companion heating unit of 105,000 B.t.u./hr. output, is 47 $\frac{1}{4}$ in. wide, 33 in. deep, and 47 $\frac{1}{2}$ in. high and weighs about 500 lbs. Floor area is 21.4 sq. ft. exclusive of space shown between the units.

Package with Varying Capacities

Fig. 7 is a unit which was also designed for residential applications. It is available in 2, 3, and 5-ton capacity on cooling, and forced warm air heating with outputs ranging from 48,000 to 168,000 B.t.u./hr. on gas, and 60,000 to 155,000 B.t.u./hr. on oil. A total of 190 different models are available.

The heating unit is on the right. The return may be taken at the bottom, side, or back of the heating unit. The supply is taken from the top.

On the heating cycle, the air leaves the blower passing over the heating surface by passing the cooling section. On the cooling cycle, the heating surface is by-passed. The change-over damper at the top may be either manually or automatically operated as dictated by seasonal requirements. A single blower is normally used for both heating and cooling.

The combination unit in the 3-ton size and 96,000 B.t.u./hr. output with gas heating is 30 $\frac{1}{2}$ in. deep, 46 in. wide, and 55 in. high. It takes 9.6 sq. ft. of floor area and weighs 650 lbs. Other models take more or less floor space depending on the size required. All of these packages, both heating and cooling, are 55 in. high and 30 $\frac{1}{2}$ in. deep. Only the width varies.

Finally, there are those units designed for cooling with radiators. The refrigeration unit in this instance cools water in a large water cooler or chiller, and the water is pumped to radiators which are designed with fans to circulate room air through them for cooling.



FIG. 6—Year-round residential air conditioning system consisting of two packages, one containing two or three one-ton refrigeration circuits, depending on the capacity of the unit, and the other the heating unit and blower assembly which match the cooling unit in appearance. (In the picture the unit at the right with the cover off is the cooling section and behind the lady is the heating section in matched cabinet design.) Air passes through both systems on the cooling cycle, and by-passes the cooling coils on the heating cycle.

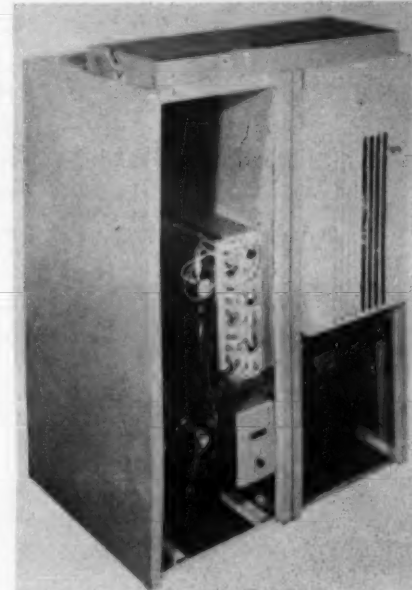


FIG. 7—Unit for year-round applications, with cooling section (left) and heating section (right) available in varying capacities to meet the conditions of a particular climate.

Alabama Dealers, Builders, See 'Weather Making Show'

BIRMINGHAM, Ala. — During the week of March 16, the Shook & Fletcher Supply Co., local Carrier air conditioning distributor, will stage a "Weather Making Show" combining a sales presentation for dealers with a special showing to architects, builders, contractors, and the public.

The show will be staged in six rooms of the Tutwiler hotel from 9 a.m. to 5 p.m. Three rooms will con-

tain heating and air conditioning equipment, one will display accessories, one literature, and in the sixth, actual room cooler installation demonstrations will be held twice daily.

W. S. Ramseur, manager of dealer sales, declared that the company has sold approximately 200 combination heating and cooling units for \$12,000 to \$17,000 residences.

Refrigeration Systems, Inc. Elects 3 New Officers

CHICAGO—New election of officers following the resignation and withdrawal from the company of Alfred Kaufmann, who was vice president and treasurer, was announced recently by Joseph H. Lazar, president of Refrigeration Systems, Inc.

Daniel M. Brown, who is in charge of the Hudson Bay Div., was elected vice president; Lawrence H. Lazar, chief engineer, was named secretary; L. Cashia, office manager, treasurer.



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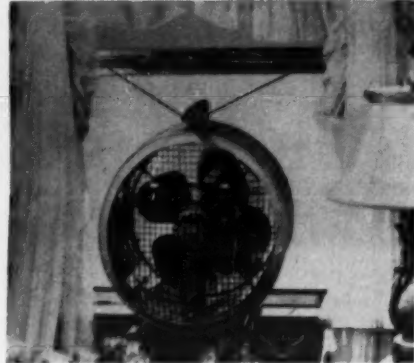
What's New

When requesting further information on new products, please use "Information Center" form.

4-Way Window Fan Tops Westinghouse Line



Riviera used as a floor fan.



Riviera installed in window.

KEY NO. C-331

EAST SPRINGFIELD, Mass.—A versatile, new four-way window fan—the 16RWF Riviera—highlights the 17-model 1953 fan line of the Westinghouse Electric Corp. announced recently by W. B. Massenburg, fan manager.

Another innovation in 1953, according to Massenburg, will be use of a new blade material—plastic Hemcolite S-R—in five models of 10-in. fans. Hemcolite S-R makes possible maxi-

mum safety combined with more quiet operation, he explained.

Priced at \$69.95, the new 16RWF Riviera is a portable and reversible window fan, operated at two speeds, and may be used as an exhaust or intake fan for any window in the home or placed face-up on the floor to provide all-round room circulation, Massenburg pointed out.

The Riviera is capable of circulating 3,200 c.f.m. In addition, this four-way fan is equipped with exclusive "air injector rings," which boost air displacement by approximately 40%.

Mounted on wheels, the new model 16MA3 Mobilaire is a combination window ventilator and portable fan

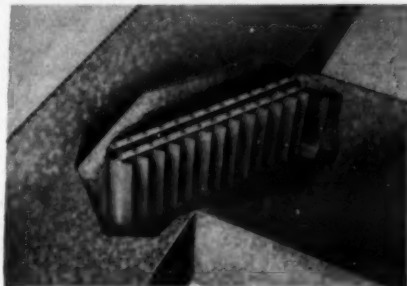
which may be placed three feet in front of an open window so as to exhaust the hot air inside a home, replacing it with cool air coming through another window. The 1953 Mobilaire exhausts or circulates 3,200 c.f.m.

Two major features are incorporated in the Mobilaire—deeper pitched, ultra-quiet blades and "air injector rings" similar to those found in the 16-in. Riviera fan. Both the double-duty Mobilaire, priced at \$79.95, and the Riviera are safe for use in homes with children, because the blades are enclosed by the five rings and fine-mesh grills front and back.

Models having the new Hemcolite one-piece blades are: the 10LA4 Livelyaire desk bracket, to sell at \$17.25; the 10PWV2 Poweraire window ventilator, at \$29.95; the 10DA2 Hassock Debonaire, at \$34.95; the 10 PHV Poweraire Home Ventilator, at \$44.95, and the 10PA2 Poweraire desk bracket fan, \$27.45.

Other fans in the 1953 line, which have Micarta blades, include: the 16DA2 Hassock Debonaire, at \$59.95; the 16WF2 deluxe window fan, at \$49.95; the 12PA2 Poweraire desk bracket, at \$45.80; the 16PA2 Poweraire desk bracket, at \$55.95; the 16SD3 standard desk bracket, at \$45.80; the 20WA2 Whirlaire, long-range air circulator, at \$119.95; the 16WAP2, pedestal Whirlaire, at \$94.95; the 16WA2, counter Whirlaire, at \$79.95; and the 20WAP2, pedestal Whirlaire, at \$139.95.

The 12LA3, Livelyaire desk bracket fan, at \$27.45, has metal blades.



Titus Offers Air Volume Extractor and Controller

KEY NO. C-332

WATERLOO, Iowa—Titus Mfg. Corp. here has announced a new double-duty adjustable air volume extractor and controller.

It comes factory assembled and, according to the company, saves sheet metal men up to 50% in assembly time over hand-made methods.

The new AG-45 is installed with two screws. It is also made to replace an extra volume controller, and is adjustable from full-open to full-closed position.

The unit makes use of curved blades which turn to control air volume in such a manner as to bring even distribution to the entire grille face, the company said.

According to the manufacturer, the AG-45 turns air from the main duct, reduces pressure losses, stops excess turbulence, features heavy-duty construction, and is rattle free. Parts are made from 14 and 26-gauge steel.



Newly Styled Dishwasher Has Bowed Front Panel

KEY NO. C-333

MANSFIELD, Ohio—A restyled front-opening, top-loading dishwasher is being offered by Westinghouse.

Keynote of the new styling is the bowed front panel, accentuating the massiveness of the new model and the control section with a chrome-finished, visor-type cover.

The unit easily handles a dinner service for eight, according to the company. The top rack holds silverware, cups and saucers, and glasses and stemware up to 7 in. tall. The bottom rack holds plates 11 in. in diameter as well as large pots.

Operation of the dishwasher is divided into four phases: rinse, wash, double rinse, and the drying period. Total time for all four phases is said to be about 37 min. Each rinsing and washing phase uses 7 qts. of water at recommended temperatures of 140 to 160°.

The dishwasher is available as a 48-in. dishwasher sink combination; a 24-in. cabinet model; an under-counter model, and a portable 24-in. free standing unit.

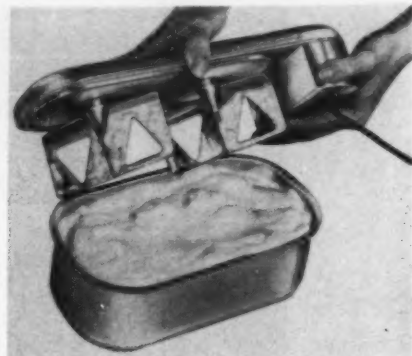
Complete Sandwich Unit Fits Ice Cream Cabinets

KEY NO. C-334

DENVER—A new "low-priced" sandwich unit which will fit into any standard ice cream cabinet, yet provides complete facilities for serving all kinds of cold meat and salad sandwiches, has been developed by Smith-Werner Co. as an addition to its "Serv-All" fountain line, according to Ross M. Dunshee, president.

The new unit features four containers covered by two double lids for salad-type sandwich spreads or pickles. It has a storage rack for sliced meats and cheeses located beneath a removable, sectional-type maple cutting board.

"Installation is no problem, inasmuch as this compact unit fits into any opening of any standard ice cream dispensing cabinet, from which it is refrigerated."



Device Makes Ice Cream In Domestic Refrigerator

KEY NO. C-335

PHILADELPHIA—The Enterprise Manufacturing Co. of Pa., manufacturer of food equipment, has announced a new ice cream freezer which makes ice cream automatically without salt or ice when placed in any refrigerator and plugged into an electric socket.

The device is known as the Enterprise "Home Aid." In about 35 to 45 minutes, it will produce a quart and a half of delicious, smooth-textured ice cream," the company said.

The "Home-Aid" is described as "compact, light-weight, portable," and retails for \$19.95.



Stop service calls . . . keep out rust and sludge . . . open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

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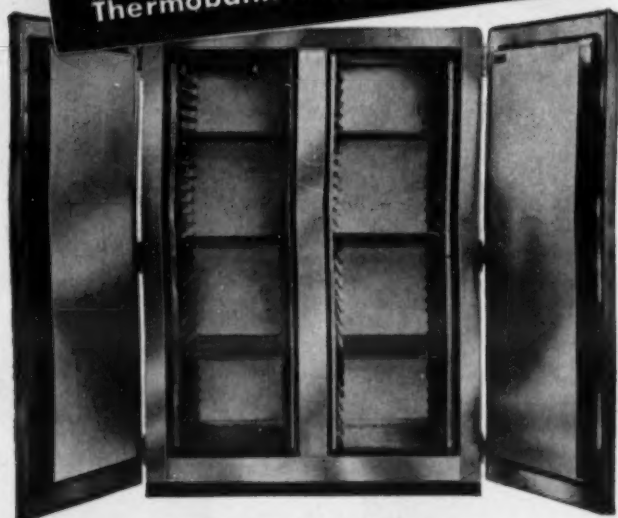


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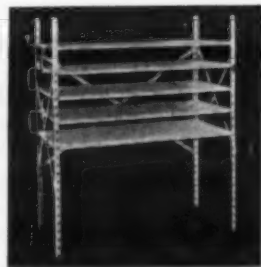
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Quick Freeze Plates are available as stands which can be installed in any cooling room to provide faster freezing and preservation of your perishables.



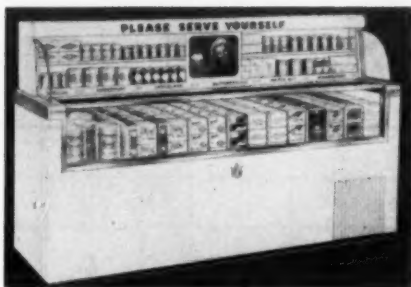
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What's New (Cont.)

Schaefer Introduces 7-Ft. Glass-Front Cabinet



KEY NO. C-337

MINNEAPOLIS — Designated the GF-19, the latest Schaefer glass-front merchandising cabinet with related item superstructure holds 952 pint ice cream packages.

It has five shallow compartments for merchandising pints with a capacity of 420 packages plus two larger sections for merchandising halves and gallons. These two extra sections have a capacity of 106 rectangular half gallons or 88 round half gallons.

A full 7 ft. in length, the cabinet has over 6 sq. ft. of top opening. A disappearing night cover slides beneath the shelf superstructure. A

product-price strip channel runs the full length.

Because of the preference shown for the related item superstructure which is optional on Schaefer's other glass-front models, this merchandising feature is included at no extra cost on the GF-19.

The superstructure has one 11 by 14-in., full-color transparent picture standard with the Schaefer "fire engine" animated picture optional at slight added cost. Use of the superstructure is said to add approximately one-third more merchandising area to the same floor space.

All cabinet walls are heavily coiled and supplemented with coil refrigerated partitions.

The glass front is of the four-thickness, hermetically-sealed, "Clear-view" type.

An extra plate glass baffle is provided next to packages and is removable for easy cleaning.

A Schaefer feature, warm air from the unit compartment is blown over the front of the glass for clearer vision.

The unit is a hermetically-sealed, ¾-hp., 230-volt type.

Evaporative Cooler Built for Maximum Visibility

KEY NO. C-338

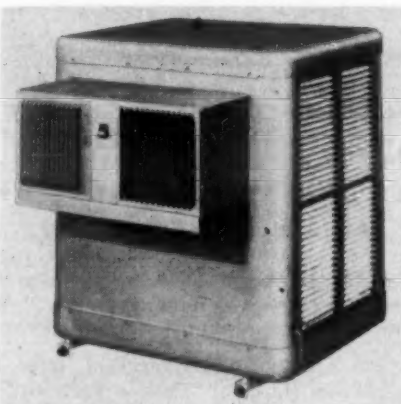
LOS ANGELES—To permit maximum visibility with minimum light obstruction, a line of "Clear-Vue" model evaporative coolers has been announced by Thermador Electrical Mfg. Co. here.

Air outlet discharge on these models is at the top of the cooler, the company explained. Scientifically designed louvers diffuse air currents throughout the area that is to be cooled.

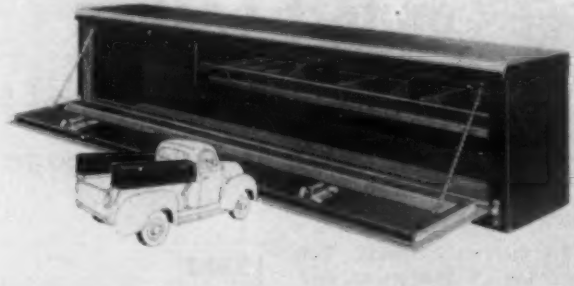
To install, just rest the air outlet on the window sill and adjust brackets at the bottom of the cooler for leveling.

Operating switch is located at center front.

Both Clear-Vue models—the TCB-183CV at 1,800 c.f.m. and the TBC-



253CV at 2,500 c.f.m. are equipped with built-in pump, float valve, window duct, and leveling feet, according to the company.



Twin Tool Compartments Fit Light Panel Truck

KEY NO. C-339

ST. LOUIS—Service-Twins, newly designed tool and material compartments, for ½ and ¾-ton pick-up trucks are now being produced by McCabe-Powers Auto Body Co.

The compartments are shipped in pairs, completely painted inside and out. The finish, in medium-dark green, is baked on synthetic enamel that resists rust and chipping.

Compartment doors are of double-panel construction and are completely weathertight. Slam action

catches are recessed for safety and appearance. Cylinder locks, provided on each door, are keyed alike for convenience.

Parts bins are provided for each compartment as standard equipment. Bins are equipped with removable dividers.

Service-Twins are available in 74 and 84-in. lengths for installation on ½ and ¾-ton pick-up trucks respectively. They can be mounted in a few minutes using only a drill and wrench. An overhead rack, with adjustable ladder brackets, is optional.

Reducer Broadens Use of Flareless Tube Fittings

KEY NO. C-3310

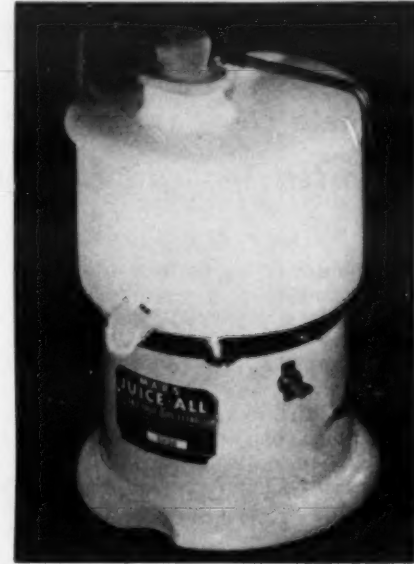
CLEVELAND—A new tube end reducer, as an addition to its standard line of Ferulok flareless "bite" type tube fittings, is announced by the Parker Appliance Co. here.

The new reducer is used to convert any Ferulok fitting into a combination size unit, permitting connection of a smaller size tube as is often necessary in certain installations.

The reducer is inserted into the tube connection end of the regular

fitting and attached with the nut and ferrule of that fitting. The other end of the reducer is coupled to the smaller size tubing with the reducer's nut and ferrule.

The new reducer, described in Parker catalog sheet 4320A10, is available for all commonly used reductions within the Ferulok size range of ¼ in. through 1 in. outside diameter tubing. Ferulok fittings are offered especially for heavy wall tubing which may be required.



Juice Extractor Handles Pint In Two Minutes

KEY NO. C-3311

BEVERLY HILLS, Calif. — Mars Mfg. Co. here announces a new 1953 electric Mars "Juice-All," a vegetable and fruit juice extractor that separates juice from the pulp.

The Mars Juice-All extracts juice from tuberous, leafy vegetables, and fruits—carrots, celery, spinach, apples, etc.—producing a pint of juice in two minutes.

Special features of the Mars juicer include an improved fast-action cutter; giant-size, easily detachable bowl, and heavy-duty all ball-bearing motor that requires no oiling.

Mars Juice-Alls are available now. They retail at \$69.50.

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

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Key No.	Key No.
Key No.	Key No.
Key No.	Key No.

Products Advertised
(list name, page, and issue date)

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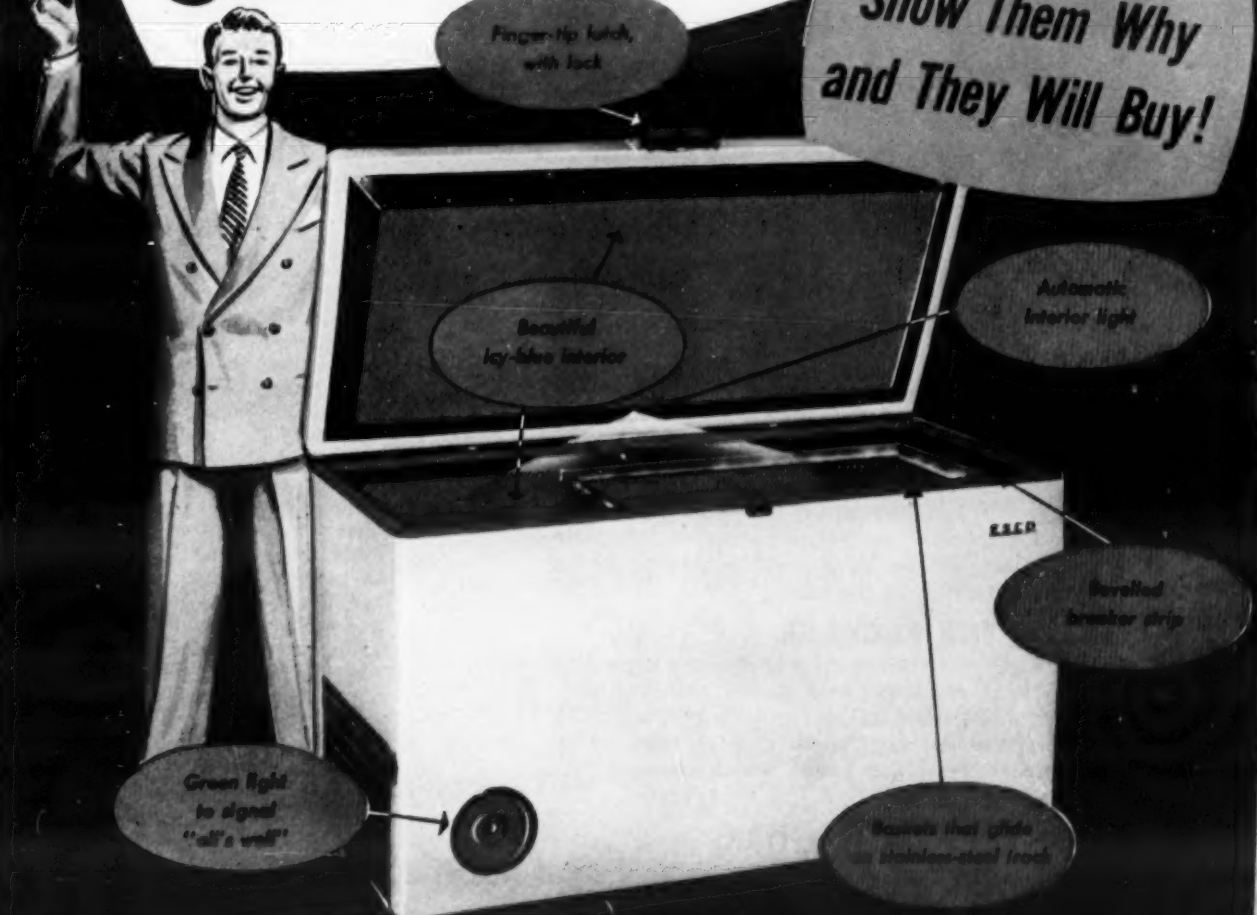
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Ice Storage Systems for Comfort Cooling

Where Demand Is Great for Short Time Such as In Churches, Funeral Homes, or Booster Applications, Smaller Compressor Can Be Used Than Tonnage Requires

By J. A. Wilkerson, Field Engineer, Dole Refrigerating Co.

The use of Ice Storage systems for air conditioning is fast gaining recognition in applications where there is a heavy demand for a short duration, with sufficient time to recover the ice.

The advantages obviously result from the fact that large tonnage applications can be obtained with a smaller size compressor than indicated by the tonnage. Thus, there results a saving in the K.W. input to the motor and a reduction of any demand charges required by the power company.

The latent heat storage application can be successfully used in churches, funeral homes, tourist courts, and a medium for supplying additional tonnage to a direct expansion system as a booster.

Many in the refrigeration industry are familiar with ice storage systems, as they are applied in the dairy industry for the cooling of milk. The building of ice on plates or coils presents no difficulty.

The crux of the system is to melt the ice and have as much exposed surface as possible to the melting water flow. This can be accomplished with agitation by a motor driven agitator or by increased pump capacity beyond the g.p.m. required by the air conditioning water coil.

In an air conditioning system, the maximum tons per hour \times the hours that the air conditioning will be re-

quired, established the total Ton Hours of available ice storage needed. In order to clearly approach any air conditioning application using latent heat storage, it would be well to have an analysis or work sheet chart to determine the equipment necessary.

Before discussing the work sheet chart, it might be well to state some fundamental and elementary facts, that most experienced refrigeration engineers already know. However, it may be well to refresh our memory, so that the necessary approach to a given application may be clear.

A cubic foot of ice weighs approximately 56 lbs. A square foot of ice 12 in. \times 12 in. \times 1-in. thick would weigh approximately 4.6 lbs. A square foot of ice 2½ in. thick would weigh 11.6 lbs. and would have an I.M.E. of 1,670 B.t.u. (per square foot of ice 2½ in. thick).

A latent Heat Storage Refrigeration Plate has a dimension of 34½ or 26 sq. ft. of surface on one side. Two sides of the plate would have 52 sq. ft. for both sides. Fifty-two sq. ft. of surface \times 11.6 lbs. ice, equals 603 lbs. of ice per plate. Six hundred and three lbs. of ice equals 86,832 B.t.u. per plate.

From the above it can be determined that we have approximately 7¼ refrigeration tons of latent heat storage per plate. The number of plates required for a predetermined

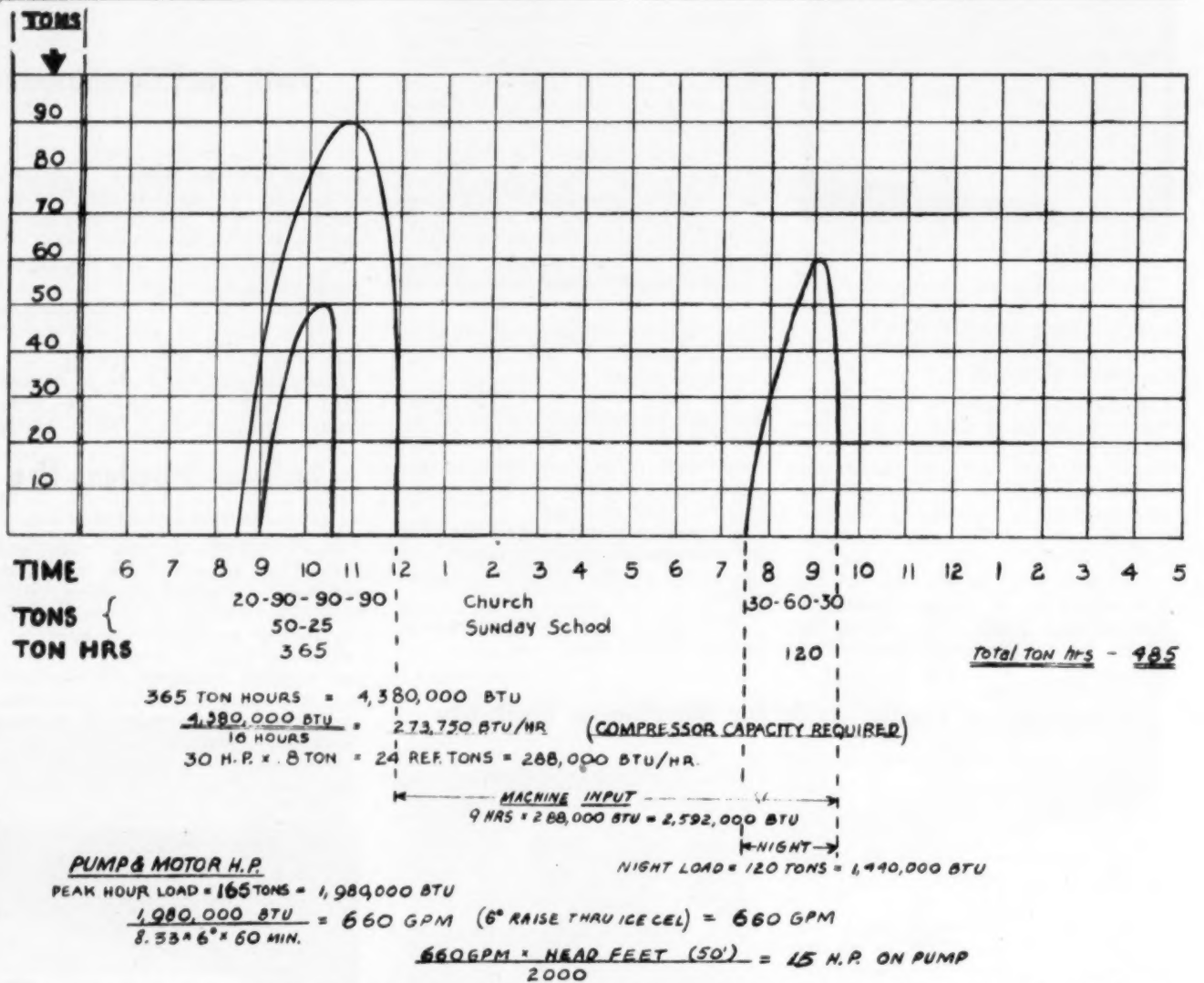


FIG. 1. Work sheet chart for a church requiring 90 tons on hour for 3 hours. During the same period there is a Sunday school load of 50 tons an hour for 1½ hours. It is also necessary to provide a 60-ton an hour load for two hours for evening services. In addition to the 90-ton hour load for three hours, there is a 20-ton load with the system being turned on one half hour before the services.

load will give the total B.t.u. available for a given number of plates.

In church applications, we have found that the initial cost is solicited by donations and in many churches does not present too difficult a problem.

However, the operating cost, after the system is installed, must come out of current revenue. Obviously, it is much cheaper to pay any demand charges and energy input on a smaller compressor than to have to pay the tariff on a 50 or 100-hp. machine.

Shut Compressor Off During High K.W. Use

We have seen one church application where the demand load is 35 kw. The church lights, pumps, air handling unit, and other energy requirements total 29 kw. They have a 30-hp. compressor and in order not to exceed the demand, they build ice during the week and cut the compressor off on Sundays, when the other units are in operation.

Proceeding with the discussion of the work sheet chart (Fig. 1) let us assume this is for a hypothetical church requiring 90 tons an hour for 3 hours. During the same period there is a Sunday school load of 50 tons an hour for 1½ hours. It is also necessary to provide a 60-ton an hour load for two hours for evening services.

Analyzing the church load, we find that in addition to the 90 ton hr. load for three hours, we have a 20-ton load. This load, of course, is the result of the system being turned on one half hour before services to take care of the latent heat of the air and the sensible heat of the pews and fixtures.

Since this imposes an additional load, the total Ton Hours for the church is 290 T.H. The Sunday school load during the same period imposes 75 Ton Hours giving a total Ton Hour load for the combined services of 365 Ton Hours.

We arbitrarily decided that we would like to recover the ice in 16 hours. The 365 Ton Hours equals 4,380,000 B.t.u. This 4,380,000 B.t.u. divided by 16 hours established the fact that we will have to have a compressor with a B.t.u. capacity of 273,750 B.t.u./hr.

In determining compressor capacities, it has been established that at 20" suction pressure, we can only obtain .8 ton per hp. Selecting a 30 hp. compressor, we find that 30 hp. \times .8

ton equals 24 refrigeration tons or 288,000 B.t.u./hr. This is sufficient to recover our ice in 16 hours.

Use 25% or 33% of Peak Load To Determine Hp.

A rule of thumb method, to approximate the compressor for any given application, is to take 25 or 33% of the peak hour load in determining the necessary horsepower of the compressor.

For the evening service we would have 60 tons/hr. for two hours or 120 Ton Hours. The 120 ton hours equals 1,440,000 B.t.u. Now if the ice were completely melted during the morning services, we would have nine hours for recovery or compressor input. (Seven hours before and two hours during the evening service) This would amount to 9 hrs. \times 288,000 B.t.u. equals 2,592,000 B.t.u. or over a million B.t.u. in excess of requirements.

Ice Recovered In 16 Hours

The ice would be recovered in 16 hours and meetings could be held every night of the week. We have several safety factors not calculated.

1) Since good engineering decrees

that load estimates be calculated at 4 p.m. sun effect, it follows that the ambient at night during the service would be lower.

2) We have not taken into account the specific heat rise in the pounds of water from 33° to 45°.

The number of LHS plates required would depend on the selected operating conditions, as herewith indicated.

Full capacity Latent Heat Storage: 4,380,000 Btu., for 365 ton hrs.

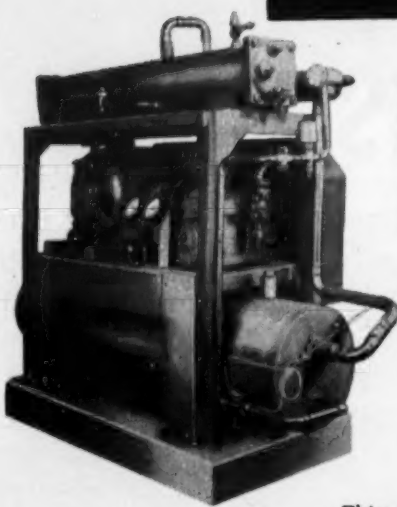
89,424 Btu/plate = 48 plates.
 or 4,380,000 Btu., for 365 ton hrs.
 less 864,000 Btu., compressor input during 3-hr. services.
 3,516,000 Btu., storage required
 3,516,000 Btu., storage required

89,420 Btu/plate = 39 LHS plates

Continuing with the "work chart" for the pump and motor requirements, it is best to work with or consult the pump manufacturer to determine the best type of pump to use. However, to arrive at the g.p.m. required, we divide the peak load/hr. by the weight of water \times 6° heat

(Continued on next page)

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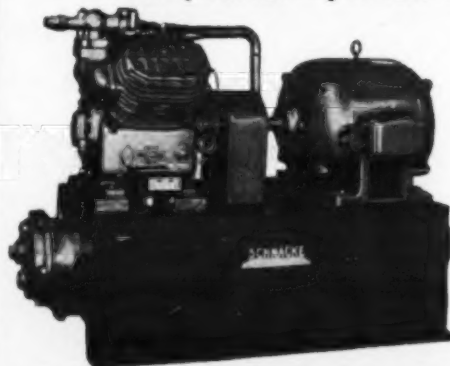
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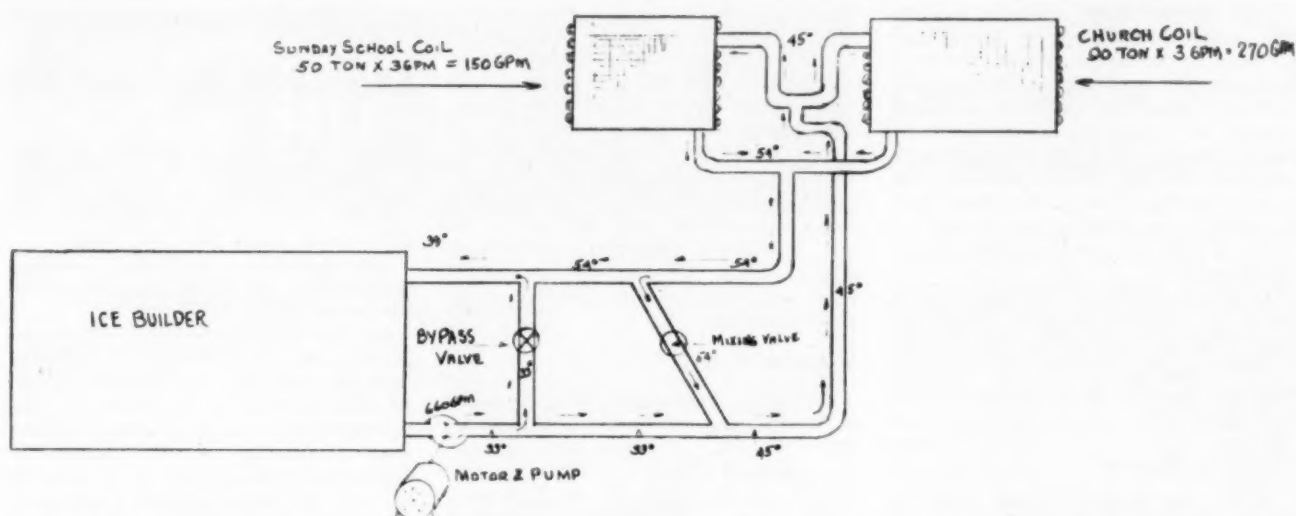


FIG. 2. Showing a hypothetical water temperature condition, the manner of bypassing the excess g.p.m. to promote agitation in the tanks, the water tempering or mixing valve, and hypothetical water temperatures in the discharge and return water lines.

Ice Storage Systems for Comfort Cooling

(Continued from preceding page)
rise x 60 min. This indicates that 660 g.p.m. are required.

The 6° heat rise is between the discharged and returned water through the ice bank and is not to be confused with the heat rise and g.p.m. through the water coil, which is generally calculated at 3 g.p.m. and 8° per ton.

Excess Water Melts Ice

Water that is in excess of the g.p.m. required by the air conditioning coil is bypassed to set up agitation for the melting of the ice (Fig. 2).

Checking back again on the "work chart," the pump horsepower is determined by calculating the g.p.m. x the heat in feet and dividing by 2,000 factor. Since a 100% efficient pump would pump 3,960 g.p.m. and there is no such pump commercially, we discount the pump capacity 30% and the motor efficiency 30% and arrive at a factor of approximately 2,000 g.p.m. which in this case would indicate a 15-hp. motor on the pump.

In Fig. 2 is shown a hypothetical water temperature condition, the manner of bypassing the excess g.p.m. to promote agitation, the water tempering or mixing valve and hypothetical water temperatures in the discharge and return water lines.

It isn't necessary to purchase a factory package unit of latent heat

storage systems. The latent heat storage are available in assemblies of six plates or in any number of single plates. The reason for this is that many church applications present a problem in installation.

In several cases the church boiler room was so small that the ice builders were installed in the church yard. Another presented the problem of getting equipment through a 30-in. door in the basement. In this instance, the 10 gauge steel was brought in piece by piece and welded into a tank 10 ft. x 20 ft. x 5 ft. high.

Ice Builder Under Lawn

In another case the ice builder was installed under the church lawn, with a rose bed on top of it. In still another case a concrete tank was formed at the outside rear of the church. We have an application proposed (not confirmed as yet) where the ice builder will be installed on the roof, much like a cooling tower.

The chilled water system using ice builders can be combined, through the air handling unit, to furnish heat in winter with hot water or steam. In summer the chilled water would be used for air conditioning.

It isn't necessary to condition the upper portion of the church structure. A stratified air blanket 12 ft. to 14 ft. above floor level is all that is required. This is accomplished by discharging the air at floor level with

forced air convectors, discharging at a 45° angle or placed 10 ft. to 12 ft. above the floor level on the walls.

Since the architectural design of some churches will not permit the above suggested method, then the air discharge is from the ceiling. Discharging from the ceiling materially increases the tonnage load.

The chilled water can be zoned and pumped to other meeting rooms for weekly meetings, without air conditioning the entire church when not necessary. The Pastor's study load of 2 to 3 tons every day can be obtained without seriously unbalancing the available tonnage load.

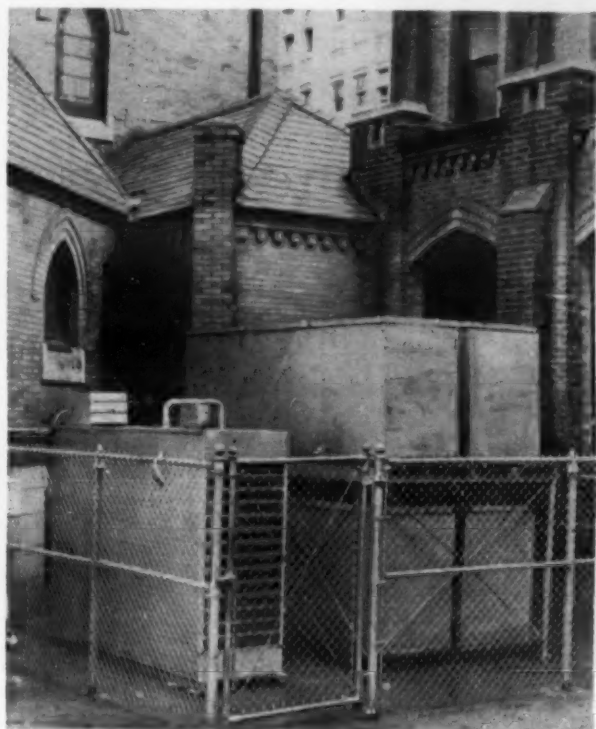
Catholic churches do not present any problem, even though Masses continue until noon. Here again, good engineering design is based on 4 p.m. sun effect. Early morning Masses do

not approach the design load conditions. The heavy load is from 10 a.m. until noon. For the weekday load, Masses are generally from 6 a.m. until 8:30 a.m.

The church can be zoned and the

first 12 or 15 pews can be in this zone. Confessionals are generally in the rear of the Church. This area can be zoned for Saturday afternoon and evening and a small air unit can be

(Concluded on next page)



INSTALLATION IN THE CHURCHYARD of St. Andrews Episcopal Church, Jackson, Miss., was a necessity because of limited space in boiler room. Four Dole LHS-100 units were installed in churchyard, along with an evaporative condenser. Operating from a 10-hp. Trane compressor, this system provided 60-ton hours storage. Three pumps were required, one for each two LHS units, which were at different levels, and one pump for the condenser. Load was estimated at 40 tons on hour for 1½ hours, or 60 ton hours.

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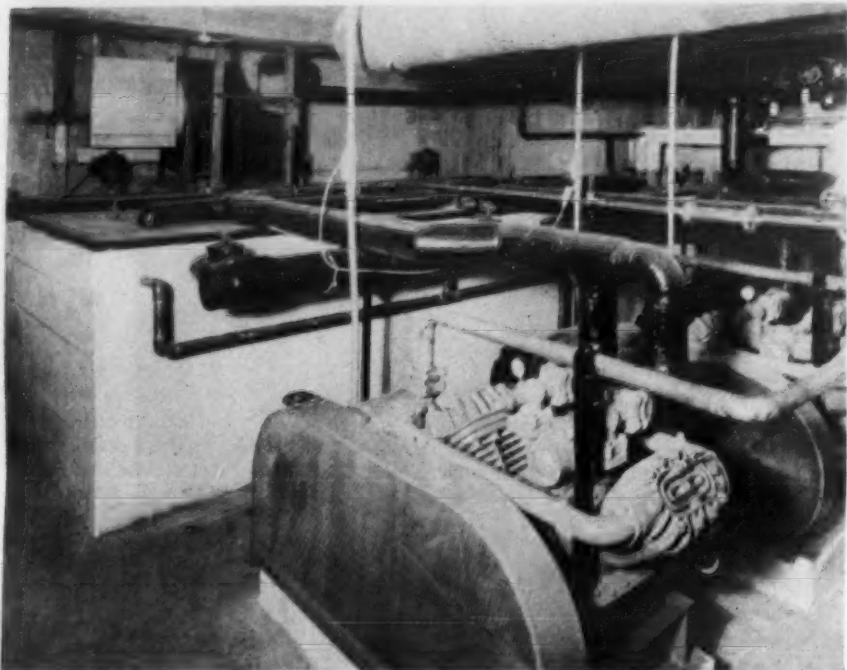
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ICE STORAGE SYSTEM for air conditioning in the Highland Park Methodist Church, Dallas, Texas. Thirty LHS Dole Refrigerating Co. plates measuring 36 x 108 in. each, operating from two 15-hp. Brunner compressors, provide 230 ton hours storage capacity. A Record central air handling unit cools the church through air ducts at the ceiling. Because of the inability to get factory-made units through a 30-in. door into the basement, tank was purchased locally, and the 10 ga. metal was brought in piece-by-piece and welded together in the basement. Ice is built up during the week and the compressor is shut off on Sunday. Load is calculated at 80 tons an hour for 2½ hours, or 200 ton hours.

Ice Storage Systems for Comfort Cooling

(Concluded from preceding page)
installed in the confessionals. We have a Catholic church in St. Louis that has had an ice builder application for the last seven years. The

system comprises 75 ton hours of latent heat storage and a 7½ hp. compressor. Their annual operating cost for years has been \$185 for energy and \$120 for water.

The Latent Heat storage system has many advantages in the larger tonnage applications. While it is true that in some localities the power company does not have a demand charge or make some special concession to churches, they all prefer a constant K. W. consumption of the smaller horsepower applications, than to have 10 or 12 churches switch on a 90 to 100 hp. load for two hours on Sunday.

Another advantage is that, where there is a church supper or gathering, with an occupancy load of 250 to 300 people, you do not have to turn on 50 to 75 hp. to accommodate a 15-ton load.

Funeral Homes

The L. H. Storage units make an ideal application for funeral homes. In this application the load is intermittent. The water is zoned to several rooms.

The casket sales room is air conditioned and the unit is turned on about one half hour before the arrival of the parties interested in the purchase. This is a small load for about an hour total.

The slumber room and reception room are generally conditioned from noon on, but the peak occupancy load does not come on until the evening and is generally over by 10 p.m. This room should be calculated for peak occupancy conditions.

The chapel is conditioned on the day of the funeral about one-half hour before the service, which rarely last more than one-half hour. The chapel should be designed for a peak occupancy load for about one hour.

The office which generally presents a small tonnage load can be on for

the 12 to 14 hour day and is not more than a ¼-ton load. This can be taken from compressor input without unbalancing the operation.

Generally speaking, a 2 or 3-hp. compressor will suffice where there is ample recovery time between funerals. Where there is a possibility of two or more funerals on the same day, more ice storage may be needed. If an extreme condition developed, which would not happen too often, then the unit can be fortified with purchased ice.

Tourist Courts

We have seen three tourist court L. H. Storage applications. One is at Elk City, Okla. and has been operating satisfactorily for five years. Another tourist court is at Ardmore, Okla., and the third installation is at Falfurrias, Texas.

The usual operation begins when the maid strips the linen in the morning and the thermostat is turned off. The ambient drops to 85° or 86° at night so the ton hour is not too high. The court office is usually conditioned around the clock 24 hours. The compressor requirements are usually 5 or 7½ hp.

Booster Applications

"Booster" applications are a potential that has not been touched as yet. Obviously many air conditioning applications do not have sufficient tonnage. This may occur from the fact that the job was sold at a price or that occupancy load conditions may have changed after the air conditioning was installed.

The Latent Heat Storage system permits the contractor to add additional air condition tonnage with the same ducts, compressor, and air handling unit as originally installed. After the day load of the direct expansion system has been completed, then the compressor is switched to build ice over night.

Such applications have a lot of merit, especially in restaurants, where the peak loads are from 11 a.m. until 2 p.m. and from 5 p.m. until 8 p.m.

There is a proposal for a bowling alley (not confirmed as yet) where the direct expansion system of 50 tons/hr. does an excellent job, from about 10 a.m. until 6:30 p.m. When the alleys start filling up for the evening, and from 6:30 until 11 p.m. an additional 25 ton/hr. are indicated.

The Latent Heat storage unit proposed would use the 50-hp. compressor to build ice over night to supply the additional 100-ton/hr. load (25 tons for 4 hours). The equipment required would be a Latent Heat Storage unit, pump, piping, and an air handling unit for the additional 25-tons/hr. load.

U. S. Air Conditioning Picks 3 Southern Dealers

MINNEAPOLIS — Appointment of three new dealers in Georgia and Virginia for its packaged air conditioning equipment is announced by United States Air Conditioning Corporation.

Klein Industries, of Atlanta, covering eight neighboring counties, will handle UsAirco "RK" self-contained central station equipment, upright store-type conditioners, and window-type room air conditioners.

Standard Sales & Service Co., of Washington, Ga., will merchandise store-type conditioners, home air conditioners, and window-type room air conditioners in six northeast Georgia counties.

Air Flo Heating & Air Conditioning, Inc., of Richmond, will handle RK equipment, store conditioners, and home air conditioners in 12 counties of east central Virginia.

Bell & Gossett Nets \$655,888 for Fiscal '52

CHICAGO—Bell & Gossett Co. has reported net earnings of \$655,888, equivalent to \$1.72 per share on the 381,028 shares outstanding, for the fiscal year ended Nov. 30, 1952.

This compares with net earnings of \$941,359, or \$2.46 per share, for the same period last year.

At the annual meeting of stockholders here, E. J. Gossett, president, said net sales of the company totaled \$13,295,857, a decrease of approximately 15% from the previous year when sales were \$15,725,881. He said that sales volume was affected in part by large inventory accumulated by customers during the "scare" buying in 1951.

Gossett told stockholders that the company's liquid assets as of last Nov. 30 totaled \$5,826,288 and were 6.59 times the total liabilities. This compares with total liquid assets for the previous year of \$5,366,163, or 2.83 times the total liabilities.

Working capital rose to \$4,941,529 from \$3,469,727 in 1951 and total assets were \$7,827,947, against \$7,241,869 the year before.

During the year the company increased its area of land in Morton Grove, Ill. to 30 acres. Additional storage facilities were added.

The company also contemplates the erection of an additional 37,000 sq. ft. of floor space in 1953 to provide for expansion of motor manufacturing and for making compressors.

An average of 720 persons were employed by the company in 1952, compared with 788 in 1951.

Gossett also told shareholders that for the past two years the company has been unusually successful in conducting experimental work in the electronics field, as well as other new products.

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4. The unique, porous Catch-All cores are molded of minute particles of a highly efficient desiccant, the efficiency of which is greater than that of the same desiccant in granular form.
5. They dry down to a low end point... a point so low that any remaining moisture is absolutely harmless!

100% activation after complete assembly, then sealed with moisture proof seals.




Don't settle for just any strainer or drier when there's a job to be done in air conditioning or comfort cooling.

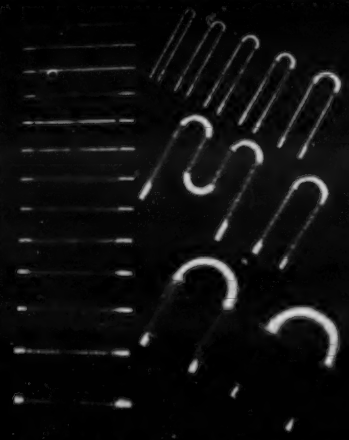
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OFF THE CHEST

PLANS SCHOOL TO HIT CONDITIONER PRICE CUTS

Dallas Air Conditioning Co., Inc.,
Dallas, Texas

Editor:

Your editorial with reference to residential air conditioning in AIR CONDITIONING & REFRIGERATION NEWS is certainly timely.

We here in Dallas are enjoying the boom tide of residential air conditioning business and along with it, we are confronted with all of the violations in good business practices that you outlined.

To do something about a situation of this character, we in the Dallas Air Conditioning Co. last fall instituted a dealer training program which we carried throughout the fall months in 10 weekly meetings, lasting about two and a half hours each.

At these meetings, we attempted to give the dealers the fundamentals of good sound design and installation, and we also stressed the point that quality could not be sold on a cheap basis, but on the other hand, they should treat their customers fairly, and obtain a reasonable profit for themselves.

Beginning next month, we are instituting another school of the same type, which will run for four weeks, and in which we again hope to point out to the dealers the dangers of shoddy work and unfair price cutting tactics.

Keep up the good work.

MARVIN L. BROWN

NAVY VETERAN AGREES WITH 'IT'S A GREAT LIFE'

Clardy's Contract Service Co.
Refrigeration—Air Conditioning
Dallas, Texas

Editor:

I was pleased when I read my copy of "It's A Great Life." I would like to send along my thanks for your work and to say I am in full agreement with its contents.

I spent eight years in the U. S. Navy and saw most of the world. This time included the last World War. Yes, all eight years at sea and not much dock duty. There is where I learned to appreciate the good old U.S.A., and more fully able to agree with the book. Only hope I can get some of my friends to read it.

When I got out of the Navy I found a terrible mess. Everybody wanted to sell with his feet upon the desk, with no experience, no engineer-

ing, no heart for the customer, and with only one thing in mind, "How much can we get out of this customer?"

I started my career at 16, working for five dollars a week to learn refrigeration. I later continued my training and work in the Navy.

When I became a civilian again no one wanted the service end of the field. Dealers called service a "Necessary Evil." So I made up my mind to find out.

I went into the service business on a "flat rate basis", all except parts. All the other servicemen bothered to tell me I would starve doing it. My work covered from 1/4-hp. fountains to 60-ton air conditioning machines. That was five years ago and I am still doing it and very satisfied. As a comparison I paid income tax on \$12,000 last year. My contracts total about 50 and the reason for what I call a good living is; will to work, experience, salesmanship, and a contract without too many "ifs and ands" or if you have trouble call me and if you don't I'll visit you anyway.

The secret of the whole thing isn't how much per ton to charge or do you charge by the expansion valve, etc., but rather the ability to look at a job and be able to estimate roughly the amount of time said job will take. I might take two jobs of equal tonnage but one contract would be twice as much as the other.

Gosh, I didn't mean to write a sermon, but wanted to let you know I appreciated the book and your efforts behind it.

G. S. CLARDY

GENUINE SCOTCH WHISKY SPELLED WITHOUT 'E'

The Trane Co.
La Crosse, Wis.

Editor:

Your publication is very much enjoyed and about the first thing which draws my attention is "Inside Dope." In your Feb. 22 issue you have a note about the British being sore about the "imitation-Scotch-Whisky" being marked "Made in Scotland, England."

One can tell that this really is imitation Scotch-whisky because all real Scotch Whisky is spelled WHISKY not WHISKEY.

I just thought you may be interested.

E. T. NEUBAUER

TEXAN'S ARTICLE ASSISTS DEALER IN SOUTH CAROLINA

Calcasieu Lumber Co.
Austin, Texas

Editor:

You will be interested to know that the NEWS has a few subscribers who read those papers of mine you have published.

Today I had a long distance person-to-person call from a Mr. Brown of the Worthington Distributorship of Aiken, S. C.

Mr. Brown had exhausted his list of manufacturers of a particular type of chilled water convecter. He was interested in learning of other producers who might offer the product and assist him in meeting his delivery specification.

The story which appeared in your Jan. 19 issue led him to call me. I was fortunate enough to be able to suggest at least two firms manufacturing the equipment he wanted.

It is nice to know weeks and months after the effort has been made to present an application story that it has reached a wide and appreciative audience through the NEWS.

FRANK FRAZEE

SOUTHERN LADY LIKES 'DOPE' AND EDITORIALS

Asheville, N. C.

Editor:

I am enclosing a check to cover my husband's subscription to your NEWS. May I take this opportunity to thank you for your excellent column, "Inside Dope." I consider that and your editorials tops—only wish that we had more such in these parts.

MRS. W. R. MELCHER

Dealer 'Gripes'

Poor Supplier Salesmen, Lack of Effort To End Malpractices Cited by NARDA Panel

CHICAGO—Their views on what suppliers should and should not do were aired at the annual convention of the National Appliance & Radio-TV Dealers Association by four retailers who took part in a symposium on "How I Can Be Sold."

Participants in the "gripe session" were Joe Fleischaker, Will Sales Appliance Stores, Louisville; Stanley Blount, Stanley's Appliance Center, Houston; Albert Labiche, Labiche's, Inc., New Orleans; and George Bates, Home Equipment Co., Memphis.

Fleischaker listed as his first complaint the fact that manufacturers sometimes run advertisements before the dealer has the advertised merchandise on his floor.

He also complained that supplier representatives don't check on their products in dealers' stores. Stressing the importance of window displays, he said he has deliberately put the wrong price on an appliance in the window and was never taken to task for it by factory men.

Continuing, the Louisville dealer said he wants supplier representatives to talk about his business when they call on him, "not my looks or my golf game." He criticized representatives, too, for not keeping promises, noting that he had dropped a washer line because the salesman failed to follow through on his promises.

REPRESENTATIVES DON'T CHECK INVENTORIES

He also cited the failure of representatives to check on dealers' inventories. If they did so, he asserted, there wouldn't be shortages in one area and surpluses in another.

Another of Fleischaker's gripes is the practice of representatives of asking him or his salesman to go out for a drink, a coke, or coffee. He said it isn't necessary to go to a cafe or a bar to talk about products.

In addition, Fleischaker protested that much manufacturer material was above the intellectual level of salesmen. Such material, he said, should be presented in simple A-B-C fashion.

He further urged suppliers to follow-up on customer-complaint letters, answer dealer letters promptly, and call back on dealers the same as dealers do with customers.

In Blount's opinion, the big problem of the dealer is to secure his just share of the business in an honorable way. He questioned the value of franchises in view of back-door selling, discount houses, sales to builders, etc.

Blount said there are still some distributors in the Houston area who believe in protecting the dealer. But, he declared, malpractices do exist there and they "hurt."

According to Blount, the dealer expects suppliers to lead the way in eliminating malpractices. If they fail to furnish this leadership, he said, dealers must do so themselves through organization.

OBJECTS TO 'ORDER TAKERS'

Labiche objected to the "order-taking" type of distributor salesman. These fellows, he asserted, have no really constructive ideas that will help his salesman; all they're interested in is meeting their sales quotas.

But one representative showed him how other dealers had done a good job with his product, Labiche pointed out. He described this salesman as "a man with ideas" who kept a file on successful promotional methods.

Labiche said this salesman didn't "sell" him—"I bought." And when the program suggested by the salesman slowed down, he came back and pepped it up, Labiche added.

Labiche told the dealers he wouldn't have most supplier representatives working for him—"They couldn't replace my men." He claimed most representatives "could learn more from our sales training program than we do from them. They're the ones who are in need of sales training."

Stating that his personnel no longer attend distributor sales meetings because they waste valuable time when the men could be selling, he concluded: "I want to be sold the same way I have to sell."

Bates confessed that he had no serious gripes and commented that "Memphis must be the garden spot of America." He admitted that "we

have problems, of course," but, he said, "we always will."

RETAIL SALESMEN MUST KNOW PRODUCTS

However, Bates emphasized the need for all retail personnel—both salesmen and servicemen—to know their products thoroughly. He said consumers have been bombarded by giveaways for so long that they now realize they won't get something for nothing and are now more interested in quality products that will do a job for them, and in good service.

So, Bates stated, the more the retail salesman knows about the product, the more sales he will make. The day of the information tag for the salesman to read is passing, he observed, in urging suppliers to give dealer personnel through training.

Cashman To Supervise Sales for Servel-N.Y.

NEW YORK CITY—William J. Cashman has been appointed sales manager of Servel-N.Y., distributing subsidiary of Servel, Inc. in New York City and on Long Island, according to Paul A. Hilton, manager.

He will supervise the various sales divisions which include dealer, utility, apartment house, and builders. These divisions are responsible for distribution of refrigerators, home freezers, room air conditioners, Wonderbars, and water heaters to the Manhattan, Brooklyn, Bronx, Queens, Nassau, and Suffolk areas.

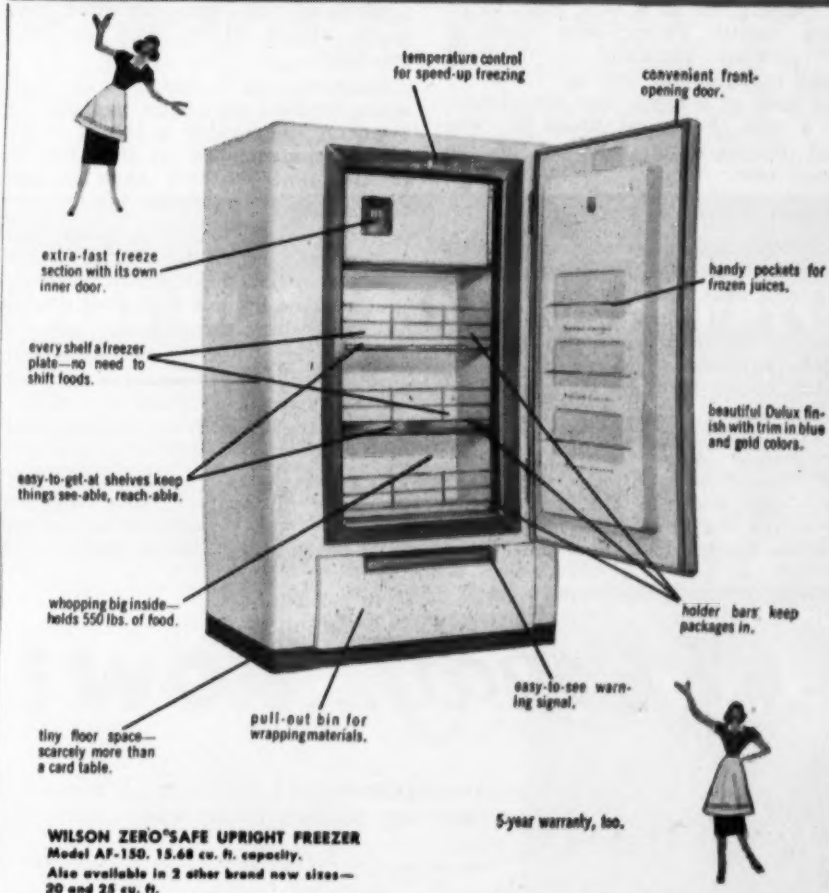
Cashman has been in a sales management capacity with Servel for several years.

W. J. Cashman

tribution of refrigerators, home freezers, room air conditioners, Wonderbars, and water heaters to the Manhattan, Brooklyn, Bronx, Queens, Nassau, and Suffolk areas.

Cashman has been in a sales management capacity with Servel for several years.

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WILSON ZERO-SAFE UPRIGHT FREEZER
Model AF-150. 15.68 cu. ft. capacity.
Also available in 2 other brand new sizes—
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Wilson HOME FREEZERS

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- GOOD PROFIT ... a really worth-while mark-up.
- FREEZERS ONLY ... no side-lines, no tag-a-long products.
- POWERFUL ADVERTISING SUPPORT ... in leading magazines.
- HARD-SELL LOCAL ADVERTISING ... a complete co-operative campaign for newspapers, radio, television, etc.
- BUSINESS-BUILDING LITERATURE ... direct mail pieces, folders, broadsides, catalog sheets, display pieces.
- NATION-WIDE FINANCE PLAN ... to "untie" your cash investment.

Look into the Wilson Franchise Arrangement today. Write, wire or phone for details and availabilities.

WILSON REFRIGERATION, INC.

101 Glenwood Avenue, Smyrna, Delaware

America's FIRST makers of up-right home freezers
Home Freezers • Farm Milk Coolers
Commercial Refrigerators

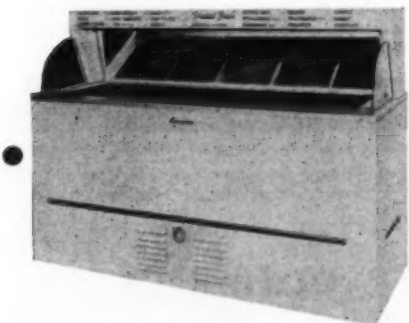


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Ice Cream
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where you can make sales every day.

Write for our 1953 Catalog and the
"Cunningham Sales Plan."

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Refrigeration Problems and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

The Ice Bank

Occasionally a letter is received that indicates that the ice bank is not being used as much as it deserves. Quite often, the use of the ice bank can reduce the over-all cost of supplying refrigeration and the space required for the equipment.

The ice bank is particularly applicable to installations that have very heavy peak loads of short duration once or twice per 24 hours and little or no load the rest of the time.

The ice bank is aptly named, for it is a savings bank that permits heavy withdrawals at one time of refrigeration deposited in smaller amounts over a longer period. It is a heat bank in reverse, that will store refrigeration into a small compact space.

It is the application of mechanical refrigeration to the old, old principle of making ice at a slow rate, to be used rapidly. Twenty-four hours of refrigeration produced by a very small refrigerating unit are "banked" and used at a rapid rate comparable to a unit of several times the size and refrigerating capacity of the small unit.

LOAD 45,000, BUT IN 2 HOURS

For example, suppose that for some purpose we need to absorb 45,000 B.t.u. of heat, but only for two hours out of the 24 hours. This is refrigeration at the rate of 22,500 B.t.u. per hour, and this would require a 2-hp. water-cooled unit operating on a 25° evaporator.

To supply the 45,000 B.t.u. of refrigeration in two hours, the 2-hp. unit would run continuously for the two hours, but it would have nothing to do for the other 22 hours.

Consequently, the 2-hp. unit would

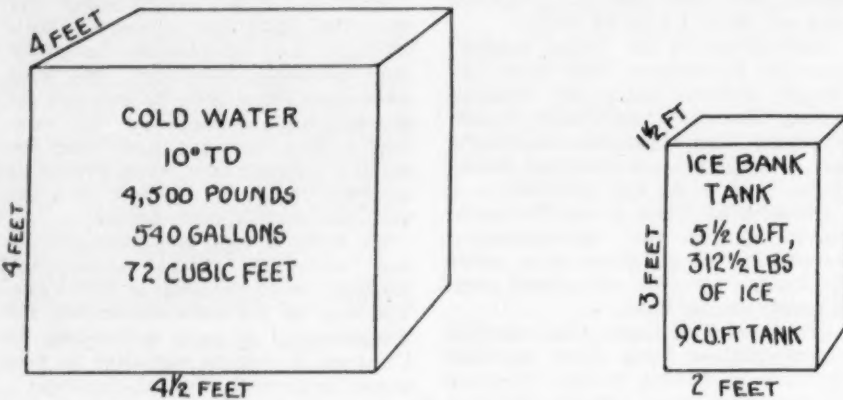


FIG. 1—Comparison of sizes of cold water tank (10° TD) and ice bank to supply hold-over of 45,000 B.t.u.

be idle 22 hours out of the 24, but it would tie up the investment required for a 2-hp. unit—not only the condensing unit but also the large evaporator required to match a 2-hp. condensing unit—an evaporator that would absorb 22,500 B.t.u. of heat per hour.

Moreover, for 22 hours a day, the space required for a 2-hp. unit and its matching evaporator is taken up by idle equipment, just so that for 1/2 of the time we will have enough capacity to do the 2-hour job.

If, in some way we could just "store up" refrigeration, we could use a very much smaller condensing unit and a very much smaller evaporator matching the unit.

The original cost of the equipment would be far less, and the interest on the investment would also be far less in proportion to the original cost of the equipment.

If repairs were required they would cost less for the small unit than for the larger one. Insurance and other fixed costs would also be less.

The smaller unit would occupy less space. Space costs money, too; many times, that space can be very profitably used for other purposes.

STORING 45,000, BUT IN 15 HOURS

There is usually some seasonal variation in the refrigeration "demand." In the summer or other heavy load periods, fifty or sixty thousand B.t.u. may be required for two hours instead of 45,000 B.t.u.

Therefore, we would select the condensing unit and its evaporator to supply an average of 45,000 B.t.u. in say 16 hours out of the 24, thereby allowing for a maximum operation of 18 or 20 hours per 24 hours during the summer.

So the average hourly capacity of the unit and its evaporator need be only 2,800 B.t.u. per hour (45,000 ÷ 16). This is just about the capacity of a 1/2-hp. unit on a 25° evaporator.

By storing the 45,000 B.t.u. of refrigeration over a 16-hour operation per 24 hours, we can use a 1/2-hp. unit instead of a 2-hp. The original cost will be far less, also the cost of installation, interest on investment and cost of repairs if needed, and the space required will be much less.

STORING SENSIBLE HEAT CAPACITY

There are several ways that we can store refrigeration. One is in brine or cold water (known as "sweet water"). If we allow a 10° rise of the water, 4,500 lbs. (45,000 ÷ 10) or 450 gals. (4,500 ÷ 8 1/4) will be required. One cubic foot of water equals about 7 1/2 gals., so the volume of the 540-gal. tank will be about 72 cu. ft. (540 ÷ 7 1/2).

As shown in Fig. 1, this will require a tank roughly 4 1/2 ft. long, 4 ft. wide, and 4 ft. high, not counting the insulation. The cost of such a tank would be rather high, and the space required for it would be greater than for the 2-hp. unit.

(For simplicity and merely for purposes of illustration, the heat leakage losses from such a tank have been ignored.)

STORING LATENT HEAT CAPACITY

Another means of storing refrigeration is ice. Each pound of ice absorbs 144 B.t.u. when melting, and thus produces 144 B.t.u. of refrigeration. To store 45,000 B.t.u., we would need to melt 312 1/2 lbs. of ice (45,000 ÷ 144).

Thus, if we use the 1/2-hp. unit to

freeze 312 1/2 lbs. of ice over a 16-hour period and we then melt it in a 2-hour period, we will supply 45,000 B.t.u. of refrigeration during the 2-hour period, or at a rate of 22,500 B.t.u. per hour, the same as that of the 2-hp. unit.

One cubic foot of ice weighs approximately 57 1/2 lbs., so the volume of the 312 1/2 lbs. of ice is approximately 5 1/2 cu. ft.

The tank for 5 1/2 cu. ft. of ice must have room in it for the evaporator coil on which the ice is frozen. Also, we must allow for some room for water circulation around the ice. In addition, we would want to allow for building perhaps 10% or 15% more ice than 312 1/2 lbs. to take care of extra heavy demand periods.

Suppose that we allow 9 cu. ft. for the tank instead of 5 1/2 cu. ft.; that is, about 50% greater than the ice itself. This will only be about 1/2 the size of the 540-gal. water tank which had a volume of 72 cu. ft. A 9-cu. ft. tank could be 1 1/2 ft. wide, 2 ft. long, and 3 ft. high.

22,000 B.T.U./HR. WITH A 1/2-HP. UNIT

Thus, a 1/2-hp. unit with a 1 1/2 by 2 by 3-ft. tank containing an ice building coil with 312 lbs. of ice on it, would supply 45,000 B.t.u. of refrigeration over a 2-hour period, which without "hold-over" would require a 2-hp. unit.

As mentioned earlier, there are applications for which this type of equipment would be quite feasible—jobs imposing very heavy loads for short periods, and little or no load the rest of the 24 hours.

One such application is milk cooling in the farm dairy. Twice a day for an hour or more each milking, the milk must be cooled quickly, thus throwing heavy loads on the refrigeration equipment. Without hold-over, such as by means of an ice bank, a large machine is required.

In the early days, the ice bank and brine were used widely in milk cooling. For a time, equipment without hold-over gained in popularity, but now, hold-over for bulk milk cooling tanks is coming back.

Another application of the ice bank is in air conditioning installations of theaters or other places of public assembly that are used only a very few hours a day. Several hundred pounds of ice are built up in a tank in the basement or even out in the ground in the yard, and the cold water from this bank is circulated to the blower units.

A small movie theater that might require 30 tons of direct expansion equipment can often be cooled with a 10-ton unit and ice bank.

The losses from ice-bank tanks and from the water lines are greater than from direct expansion equipment. Also, the ice must be built at a lower evaporator temperature and suction pressure and consequently at a lower efficiency than in the case of the direct expansion unit.

EUTECTIC SOLUTIONS

For hold-over on jobs involving temperatures below those obtainable from melting ice, "eutectic" solutions are used. These solutions do not actually freeze in the same manner as ice, but become mushy. However, they do store latent heat when thawing, and can therefore be used as hold-over for large quantities of refrigeration at low temperatures, such as in delivery trucks for ice cream and frozen foods. The eutectic solution is contained in thin tanks, called "plates," that present a large amount of surface and are convenient to use.

Usually, the cost of operation favors the direct expansion or no hold-over system, but in many installations in which heavy cooling loads are required for a small part of the day and little or no load the rest of the time, the over-all cost is very

much in favor of the small equipment using hold-over.

Each application must be analyzed and judged on its own peculiarities and requirements, so generalities often lead us into errors. The possibilities of the ice bank hold-over are sometimes overlooked however, and it is well to keep it in mind when considering a job on which it can be profitably used.



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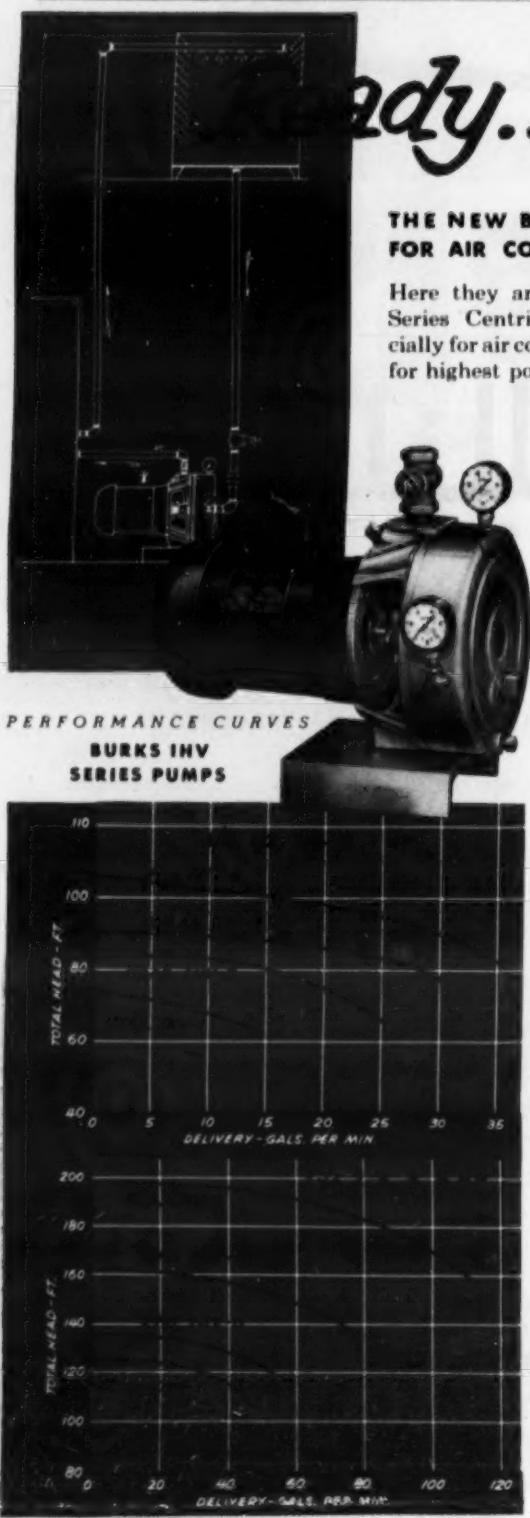
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- Patented "Kam-Action" impeller-volute combinations.
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Evaporative Condensers

Their Selection, Installation, Maintenance

By John Engalitcheff, Jr., President, Baltimore Aircoil Co., Inc.

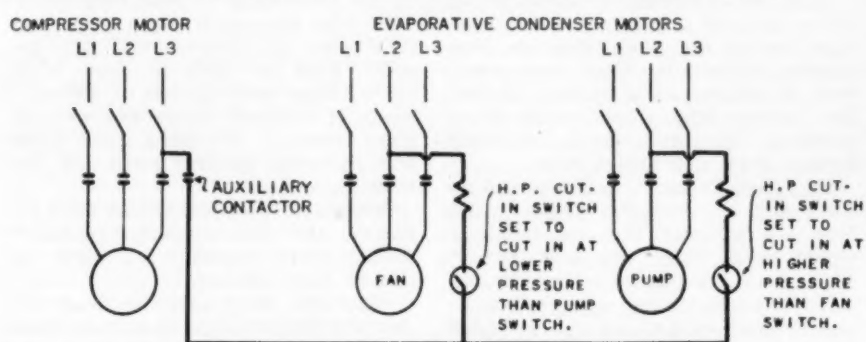


FIG. 7—Schematic diagram of control for evaporative condensers with one fan motor recommended for year-round operation or installations with excessive load variations where fairly constant head pressure must be maintained.

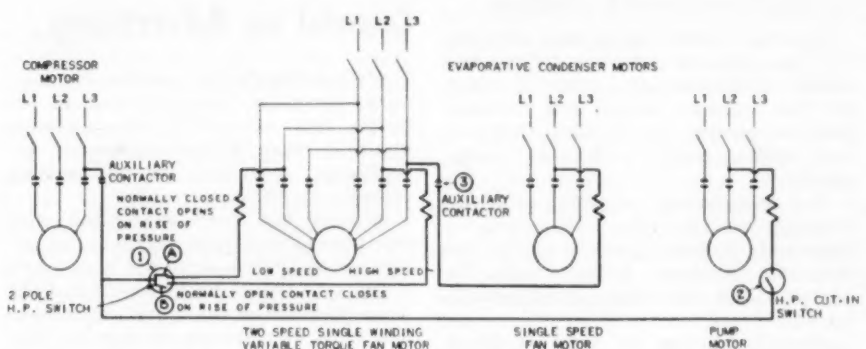


FIG. 8—Schematic diagram for control of evaporative condensers with two fan motors recommended for same conditions as Fig. 7.

SUGGESTED CONTROLS FOR YEAR-ROUND OPERATION

For year-round operation, it is often necessary to maintain fairly constant head pressure and in any case it is important to prevent the head pressure from dropping below some predetermined minimum point. This problem is sometimes aggravated by extreme variations of load.

Therefore, on all year-round installations or installations with widely fluctuating loads, it is suggested that the fan motor and pump motor be controlled by a pressure switch arranged to cut in on a rise of head pressure.

The schematic wiring diagram Fig. 7 shows the control circuit with relation to the high pressure cut-in switch for a single fan motor condenser, such as the models "U" or "P."

[The diagrams shown in Figs. 7 and 8 are basic and indicate only the control circuits relating to the high pressure cut-in switches. The circuiting shown does not include the other controls necessary for proper operation.]

In the case of condensers with two

fan motors, (such as the UL's), where close control of head pressure is required, or where great load variations occur, we suggest that one of the fan motors be of the two-speed type (single winding variable torque 1,800-900 r.p.m.) instead of the constant speed motors furnished as standard. The suggested control circuit through head pressure switches is shown on wiring diagram Fig. 8.

Control is accomplished through two head pressure switches. No. 1 is a two-pole switch with pole "A," which is normally closed, connected to the slow speed side of the two-speed motor starter. Poles "A" and "B" are interlocked and as pole "A" opens on a rise in head pressure, pole "B" closes changing fan motor speed from low to high.

The high speed side of the two-speed starter should interlock the single-speed fan motor with the high-speed side of the two-speed motor. This makes it impossible to operate only one fan motor when the head pressure conditions call for high speed operation.

On units with two fan motors, one motor should never be operated by itself unless it is operating on low speed. Should one motor only be operating on high speed it will cause an undue over-load on the motor.

On units having two standard single-speed motors never operate one motor at a time. Always operate both motors.

If both fan motors are in operation and the head pressure continues to rise, pressure switch No. 2 cuts in, starting the pump motor. As the head pressure drops, the above sequence is reversed.

First, pressure switch No. 2 cuts the pump out; then if the head pressure is still falling, pressure switch No. 1 opens contact "B" and closes contact "A," thus cutting out the single-speed fan motor and the high speed of the two-speed motor, cutting in the low speed of the two-speed motor.

(To Be Continued)



A complete "packaged" refrigerated air conditioning line.

For dealer plan write Dept. AC 353



Window Units 1/2 and 3/4 H.P.
Store Conditioners 2 to 10 H.P.
Packaged Central Station Air Conditioners 3 to 50 H.P.

Larsen To Head Sales of Boston Filter, Carrier Div.

BOSTON—Commander O. T. Larsen of Winchester has been named the new sales manager in charge of the Carrier Div. of Boston Filter Co., Charlestown, according to Mrs. E. G. Pierce, president of the company.



Commander O. T. Larsen joined Boston Filter after completing his tour of active duty with the U. S. Navy. Prior to his recall to the Navy, he was an executive of Carrier Corp., Syracuse.

Cincinnati Office Opened by Westinghouse A.C. Div.

CINCINNATI—The Air Conditioning Div. of Westinghouse Electric Corp. is opening a new branch application engineering office here, W. B. Cott, division sales manager, announced recently.

J. M. Little has been named manager of the new office, Cott said, adding that Little will offer engineering and sales assistance to distributors serving southern Ohio, central and western Kentucky, and southern Indiana.

Little is a graduate of Iowa State college. He joined Westinghouse as a graduate student in 1946, and was formerly an assistant to Cott at the Westinghouse Air Conditioning Div.

Importance of Selection and Location of Control Elements Emphasized by Radiant Panel Heating Study

CHICAGO—Importance of proper design and installation of the basic heating system, as well as the importance of selection and location of the various control elements used for radiant panel heating, was emphasized by E. F. Snyder, Jr., supervisor of products application, commercial division, Minneapolis-Honeywell Regulator Co., speaking at the 59th annual meeting of the American Society of Heating & Ventilating Engineers at the Conrad Hilton hotel here.

Snyder made public a report based on results of a two-year study on floor-type, radiant panel heating systems in two factory buildings and a residence, sponsored by the society in cooperation with the University of Minnesota. The report was prepared by Prof. A. B. Algren of the university's department of mechanical engineering with Snyder and J. S. Locke, sales manager of Honeywell's commercial division.

Purpose of the research program under which this study was made was to determine from actual investigation in the field the optimum method of control for each basic type of heating panel installed in various types of structures having varying percentages of glass areas, Snyder stated.

In order to obtain basic information which would be of immediate value, this study was limited to three types of construction which included a general office in a factory building (heavy floor panel, heavy building construction, large glass area), a factory area of an industrial plant

(heavy floor panel, light building construction, large glass area), and a residence (heavy floor panel, light building construction, small glass area).

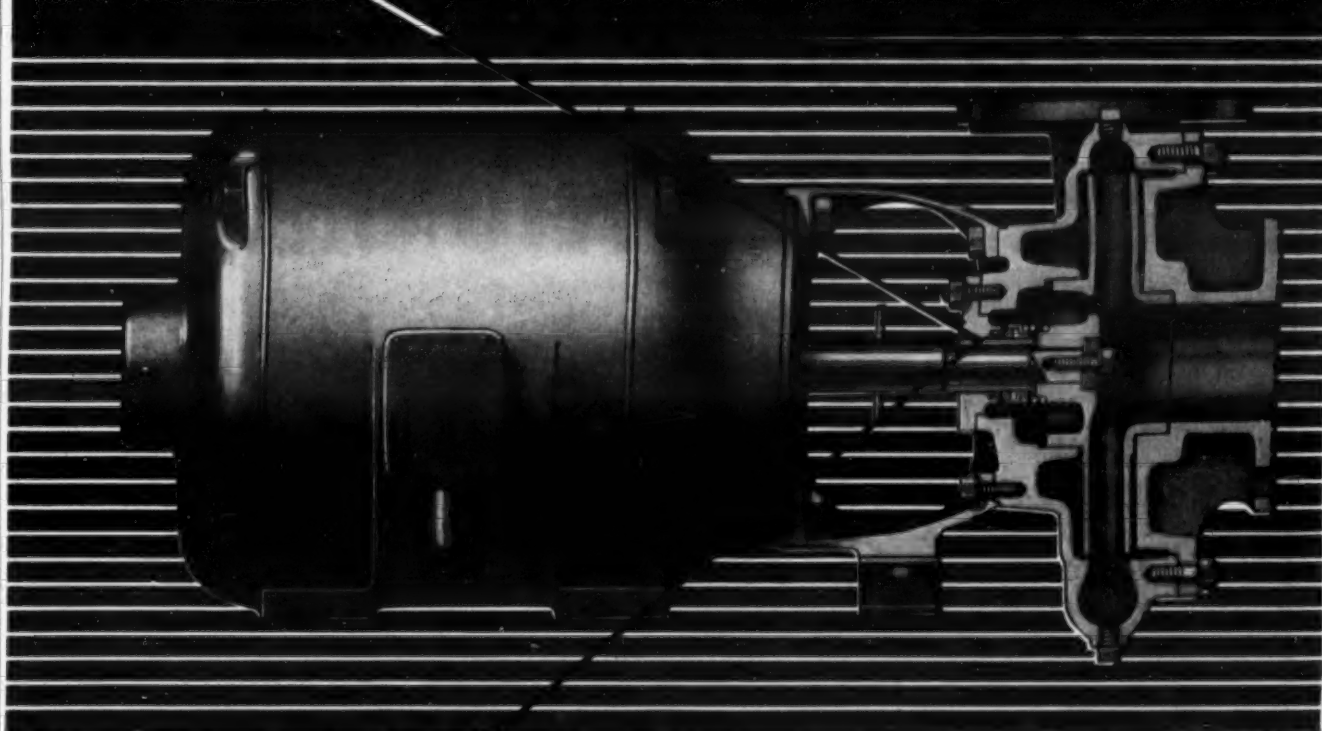
Although the data gathered during the past two years is not complete, it indicates the importance of the proper design and installation of the basic heating systems—for example, the selection of a boiler with sufficient capacity and recovery rate to satisfy the heating demands under the most severe conditions, it was brought out.

The location of an outdoor thermostat is also of vital concern, the study shows, and the most effective location cannot be categorically stated for any installation until consideration has been given to the type of construction and the local climatic conditions. Where exposed wall surfaces have a high percentage of glass area, the location of the outdoor thermostat for sensing solar effects is especially important.

One way to achieve stable space temperature in buildings of light construction was said to be the continuous operation of the circulating pump, regardless of outside air temperature fluctuation.

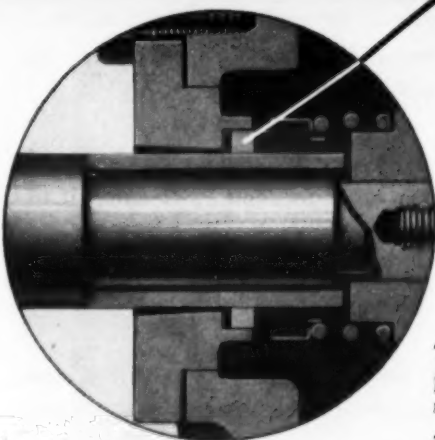
It was also found that a control system which varies the boiler water temperature upward or downward a predetermined amount, in accordance with outdoor temperature variations, permits more desirable stable control of the heat supplied to the space than would a control system using a constant boiler water setting.

NEW Remite SEAL ENDS LEAKAGE TROUBLES



B&G UNI-BUILT SERIES 1531 CENTRIFUGAL PUMP

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Cross-section showing Remite Mechanical Seal.

The "REMITE" Mechanical Seal of this pump presents a revolutionary new development in pump design... eliminates leakage... assures long, trouble-free life.

A carbon seal ring faces on a "REMITE" floating seat—a new type of material, so hard it will scratch glass—wear-proof and corrosion-resistant! This Seal is self-lubricating.

Note the pump shaft... super-finished high grade steel... oversized for minimum deflection... quiet. The impeller is of sound hydraulic design, mechanically balanced, with balance ring and relief holes to reduce thrust. The heavy duty ball-bearing motor is normally furnished as drip-proof, but is also available in splash-proof, totally enclosed and explosion-proof models.

B & G Series 1531 Uni-built Pumps are made with capacities to 1200 GPM, heads to 400 feet.

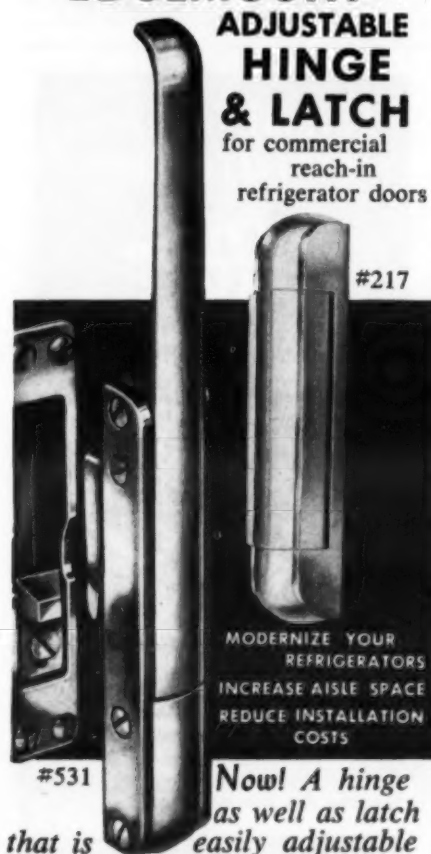
Send today for catalog No. ET-452, giving complete engineering data on the B & G Series 1531 Uni-built Centrifugal Pump.



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KASON Hardware Corporation
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Modern Living Exposition Shows Appliances; Electric Assn., Home Builders Cooperate

CHICAGO—Visitors to the Modern Living Exposition this month will enter the electrical exhibits through a special industry booth being set up by the Electric Association.

This is the third year the association has cooperated with Chicago Metropolitan Home Builders Association in sponsoring the electrical exhibits at the exposition to be held at Navy Pier, March 21 through 29.

To show the contrast with today's appliances in individual exhibitors' booths, a number of "museum pieces" of kitchen, laundry, and other appliances that grandmother used in her home 40 to 50 years ago will be displayed in the special industry booth.

According to Merle J. Lucas, Commonwealth Edison Co., chairman of the Electric Association's Exposition committee, the purpose of the exhibit of old appliances is to emphasize the strides forward made in equipment design and function, and the resulting contribution appliances and electricity have made to more convenient living.

A large sign over the industry exhibit sums up its theme: "You Can Live Better—Live Electrically." Members of the women's division of the association, dressed in authentic 1890 costumes, will act as hostesses at the industry booth.

In addition to the industry booth and the booths of the individual exhibitors, other electrical features at the exposition will be the Freezer Living exhibit (sponsored by distributors of 13 brands of home freezers

and a frozen food and a packaging materials company), a cooperative display of residential lighting fixtures, and the exhibit of the Electric Cooking Institute.

Features of the Electric Cooking Institute exhibit, in addition to the display of electric ranges, will be the "Electric Range Puppeteers," giving a five-minute puppet show starring Little Lotta Watts, her Ma and Pa, and demonstrations of controlled heat given by industry home economists.

Admiral Picks 'The Place' As Ft. Wayne Distributor

CHICAGO—The Place, Inc., has been named Fort Wayne, Ind., distributor of all Admiral products, Wallace C. Johnson, Admiral vice president-sales, announced recently.

A. B. Gray is president of the newly-formed company and B. W. Place is vice president and general manager. Gray served in an executive capacity with Firestone Tire & Rubber Co. for more than 20 years and for the past 10 years has been Norge distributor in Fort Wayne. Place was manager of the Fort Wayne branch of Radio Equipment Co. for 22 years.

Territory of the new distributor will be 13 counties, 11 in Indiana and two in Ohio. Telephone operators will greet callers with "Good morning, this is The Place."

Jan. Plant Washer Sales Up 30% Over Year Ago

CHICAGO—Factory sales of standard-size household washers in January totaled 277,309 units, up 30% from the 213,998 sold in the same month a year earlier but down 11% from December, 1952, when 310,661 were sold, according to the American Home Laundry Manufacturers Association.

January sales of automatic tumble dryers advanced 38% over January a year ago but declined 12% compared with the preceding month. The figure for January was 62,260 units, compared with 45,121 in January, 1952, and 70,584 in December, 1952.

Sales of ironers in January amounted to 24,395 units, a gain of 45% compared with December and up 56% from January a year ago.

GECC Opens Fort Worth Office, Walker In Charge

FORT WORTH, Texas — General Electric Credit Corp. has opened a new office in Fort Worth, Texas, to meet a rapidly growing volume of business in that area, according to W. E. Sigler, Dallas district manager. Jack S. Walker has been appointed manager.

Walker, a native of Van Alstyn, Texas, has been with the company since August, 1952. He was formerly collection manager in the Dallas office.

General Electric Credit Corp., a subsidiary of the General Electric Co., provides financing service for G-E and Hotpoint appliance dealers from coast to coast.

Good Sales Management Needed

Fewer, Better Dealers, Night Openings Help Keep Appliance Sales High, Blees Tells NFFC

CHICAGO—Crosley has been doing 13 to 14% of the refrigerator business during the past three or four months, William A. Blees, vice president in charge of sales for Crosley Div., Avco Mfg. Corp., claimed in speaking at the recent National Frozen Food Convention here.

He cited Crosley's achievement as the result of "correctly guessing the economic climate" that the industry would be in today. He said that in 1949, when inventories were high and other manufacturers were retrenching, Crosley went ahead and expanded its production. Blees said that Crosley did this because it did not accept outdated standards of what should be normal.

NO DEPRESSION COMING

Looking ahead, Blees said that he saw no depression in the future because the Republicans, after 20 years on the outside, would not commit political suicide by allowing three or four million people to become unemployed.

Our population is still growing, volumes will be high, but it will be extremely difficult to make money, he declared. Business today needs the closest kind of sales management, he said.

Though he was not worried about a depression, Blees said that he was disturbed about dislocations that could cause local and temporary troubles.

He said that the industry today has twice as much productive capacity as it needs, though it will not be too much for the anticipated market by 1960.

He asserted that the industry can and is producing 18 to 20,000 refrigerators a day. "The market just won't absorb that many refrigerators," he said.

Blees declared that inventories right now were in good shape, but if they should become excessive, price cutting on thin margins could cause trouble.

"This is one of the big problems of sales management right now," he stated.

PLAN 4 TO 6 MONTHS AHEAD

The factories need a lead time of from four to six months, he explained. Sales managers must plan at least this far ahead on how many units they think they can sell and then production is geared accordingly.

"If the public should decide not to buy, we can't shut the plants off fast enough to prevent the building up to excess inventories," he explained.

Blees said that Crosley is currently reducing the number of its dealers and is trying to move the remaining dealers to better locations. He said that the company is finding that it is too expensive to provide sales tools for a large number of dealers who will not be able to do enough volume to keep themselves in business.

He said that many dealers who had good locations when they built their stores now find that these locations are not convenient to their customers. Main troubles are lack of parking space and heavy traffic.

"It is costing too much money to try and induce people to come into stores that are not convenient for them," he asserted.

Another step Crosley is taking is to urge night hours on its retailers.

60% OF BUSINESS DONE FROM 5 TO 9 P.M.

"The time we serve the public is important if we are to get low cost distribution," Blees declared. He cited a survey which found that 60% of the appliance dealer's business was done between 5 and 9 p.m. and 40% from 9 to 5 p.m.

People cannot be in two places at once, he argued. If they work from 9 to 5, they cannot shop between those hours.

Blees told the frozen food distributors that he thought that food freezer plan dealers reached into the frozen food distribution field "sometimes unfairly."

"I don't think they should try to make you make unsound concessions," he asserted, deprecating claims that these plans will save a third of the food bill.

"I have been a freezer user for a number of years," Blees said, "and the only savings I can see are taking advantage of bargains at certain times of the year and labor saving

by the processing of your own food."

He also expressed the opinion that food plan purchasers will not re-order \$150 or \$200 of food at a crack. They will run out of different foods at different times and will replace them as they need them. They will go to the grocery store and buy what they want.

Blees said that the frozen food industry and the appliance industry should work together to build up frozen food volume.

"The one thing sure," he asserted, "is that when people have more food on hand, they are going to eat more."

Philco Appoints Enelow Counsel on Advertising

PHILADELPHIA—James H. Carmine, executive vice president, Philco Corp., has announced the appointment of Max Enelow, life-long advertising executive, as advertising counsel to Philco.

Enelow has been associated with the advertising and promotional activities of Philco since the company's entry into the radio business in 1928. As a member of the Gundlach Advertising Co. of Chicago, the agency handling the Philco account at that time, he was the creative head of the national advertising program which launched the first Philco sets in the American market.

In 1933, Enelow established his own agency in Chicago and was active in the advertising and sales promotion of Philco products in the middle west, then under the sales supervision of Carmine.

In 1938, Enelow joined the staff of the Hutchins Advertising Co. in Philadelphia as a copy chief on the Philco account and has since been active in the creation of all Philco national advertising and nationwide promotional campaigns.

More recently, as vice president of Hutchins, he has been in charge of creative activities in the Philadelphia office in connection with all phases of the Philco account.

Wichita Appliance Dealers To Hold Clinic on April 3

WICHITA, Kans.—The Wichita Appliance Dealers Association is sponsoring an educational One-Day Appliance Dealers' Clinic, April 3, to be held at the Lassen hotel here.

The association is receiving full promotional support from the utilities and distributors, and expects a record turn-out at the clinic meetings.

Leading manufacturing and retailing authorities will be featured as guest speakers at the clinic.

Emerson Dole, Appliance Center, Wichita, heads the committee as general clinic chairman.



Stay at the newest, most centrally located hotel in the Motor City, completely fireproof, 750 outside rooms with bath, smart new furnishings, lowest comparable rates, ample parking space—a find for the cost-conscious traveler! Dining Rooms Air Conditioned.

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This priceless help for you in your business is the result of many months of careful research and thousands of dollars of expense. The most complete compilation of Manufacturers, Products, and Parts Wholesalers in the field. The new 1953 Directory contains listings in the following categories: Household Refrigeration,

Commercial Refrigeration, Air Conditioning, and Parts, Materials, and Supplies. In all over 8,000 listings!

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'Operation Bing Bong'**Sales Training Drive Will Net Westinghouse Men \$150,000 In Prize Money**

MANSFIELD, Ohio — With more than \$150,000 in prizes to distributor and retail salesmen, an intensive sales training drive on the company's 1953 major appliances is now under way by the Westinghouse Electric Appliance Division.

Sargent said the program is based on the idea that a salesman will tell the product story and only the product story he knows best. To insure that salesmen will know the Westinghouse story best, Operation Bing Bong features a simplified four point sales story on each appliance.

Between April 27 and May 22 over 8,000 telephone calls will be made to retail salesmen across the nation asking for the four point story on a Westinghouse major appliance. Successful answers will mean cash awards both to the retail salesman and the distributor salesman who trained him.

Highlight of the program will be the week of June 22 when Westinghouse top sales management place calls in search of 32 grand prize winners. These winners will receive \$150 plus an all-expense trip to Mansfield, and distributor salesmen who trained them will receive the trip plus \$100 cash.

Operation Bing Bong features two contests; one, a sales training program for distributor salesmen and the other, a retail salesmen contest in which the telephone calls are made. The four point sales feature story is emphasized in both contests.

First phase of the promotion is now underway with major appliance factory representatives holding training meetings for distributor salesmen. As a check on this training, the distributor salesmen will record their sales stories on a major appliance and have the recording judged by salesmen from another territory. The two best stories in each distributor location will win cash awards.

New idea in the promotion is a one day sales training clinic for retail salesmen and dealers. The clinics will be held in more than 400 cities.

The retail sales clinics, to be conducted by distributor salesmen, are designed to do three things: one, give the salesmen suggestions on selling techniques; two, give a basic story on each appliance built around the four main sales features; and finally, drill the salesmen in telling a story in terms of what the features mean to a prospect.

Each clinic will feature a training unit on each major appliance consisting of a movie sequence, product presentation, and a work session.

The movie will tell of the need for sales training and explain the four sales point idea. Product presentations will make extensive use of slide films, charts, and actual demonstrations and in the work session the trainer will learn whether or not the salesman has learned the story and whether he can repeat it.

Salesmen attending the retail clinics will be required to sign a registration card to be eligible to participate in the contest.

Frigidaire Sales In New Building In Birmingham

BIRMINGHAM, Ala.—A new warehouse and office building has been opened at 601 Thirty-first St., S., by Frigidaire Sales Corp. The new building contains 52,000 sq. ft. of floor space, which is approximately double the company's original facilities here.

Frigidaire Line--

(Concluded from Page 1, Column 2) plastic top which serves as the lower shelf. There are two other full-width removable bar-type shelves in addition to a removable half-shelf, and four handy door shelves. Total shelf area is 13 sq. ft. A full-width sliding chill drawer below the freezing compartment provides additional storage space. Two "Quickcube" trays in the freezer will freeze 4 lbs. of ice.

The 8.6-cu. ft. model (SS-86) is 28½ in. wide, 57½ in. high, and 28½ in. deep, is equipped with a full-width freezer which will hold more than 41 lbs. of frozen food; has a graceful, full-length door, and many other Frigidaire design and styling features.

An insulated interior door on the freezer keeps the cold inside and also serves as a handy shelf when open for loading or unloading food. Quickcube ice trays will freeze 6 lbs. of ice in 42 large cubes.

The food compartment has three full-width shelves, including one split shelf, and one removable half-shelf, providing 16.5 sq. ft. of storage area. Also included is the full-width "Chill Drawer" and built-in Season Control to regulate air circulation in the food compartment; a half-bushel capacity fruit and vegetable Hydrator; three handy blue plastic door shelves.

The smallest Standard refrigerator, 7.2-cu. ft. model (SS-72), is 24½ in. wide, 55½ in. high, and 28 in. deep. It is equipped with a full-width freezer that will store nearly 27 lbs. of frozen food; a full-width sliding Chill Drawer, Quickcube ice trays and other Frigidaire features. Another Standard model (SS-77) with 7.7 cu. ft. of storage capacity of similar design, is equipped with a large vertical freezer.

Five apartment refrigerators range in capacity from 4.4 to 8.3 cu. ft. and in width from 24½ to 28½ in. All are equipped with roomy vertical freezing compartments, Quickcube ice trays, aluminum cold storage trays, automatic interior lights with shields, porcelain-finished food compartments, leveling glides, and cold controls.

The new Deluxe model (RS-38) 30-in. range has a new high back panel with full-width fluorescent cooking top lamp and built-in Cook-Master automatic cooking control as an outstanding design feature. The oven will hold up to six pies or 10 loaves of bread.

There are four surface cooking units on the divided top and a full-width storage drawer at the bottom of the cabinet. Other features are the one-piece cooking top, slant-front design, and porcelain-finished cabinet.

In the 40-in. size the new budget model (RS-10) features a new divided top and surface cooking unit switch controls on the back panel. In addition to the broiling, baking, and roasting oven, this range is equipped with a storage drawer with Nylon rollers, Simpli-matic oven control, electric outlet for small appliances, oven signal light, leveling glides, and other features.

Admiral Distributor Opens St. Louis Office, Warehouse

ST. LOUIS—Formal opening of the new Brightman Distributing Co. offices and warehouse at Ridgewood Ave. and Chippewa St. in St. Louis, a 27,000 sq. ft. building, was held the latter part of February.

Brightman Distributing Co., distributor for Admiral products in St. Louis and 68 of the surrounding Missouri and Illinois counties, is headed by H. P. Brightman as president. The firm is currently showing freezers, ranges, air conditioning units, and dehumidifiers, as well as new 1953 Admiral television sets and refrigerators. The Eureka vacuum cleaner is also being shown.

Halbert Miller Named Manager of Manufacturing For G-E Major Appliances

LOUISVILLE, Ky.—The appointment of Halbert B. Miller as manager of manufacturing for the General Electric Co.'s Major Appliance Div. has been announced by Clarence H. Linder, G-E vice president and division general manager.



H. B. Miller

In this capacity, Miller succeeds James H. Goss, who recently was named manager of the home laundry equipment department.

Miller is a native of Tempe, Ariz., and was graduated from the University of Arizona in 1934 with a B.S. degree in mechanical engineering. He joined the company in January, 1936, as a student engineer at Schenectady.

From 1943 until 1949, when he was transferred to West Lynn, he held a number of jobs in manufacturing, personnel, and wage rate supervisory capacities.

At West Lynn, he served successively as staff assistant to the manager of manufacturing, small apparatus division; as assistant to the manager of manufacturing, meter and instrument department; and as a proposition engineer.

Late last year, he was named manager of manufacturing for the industrial heating department at Schenectady, the position he held prior to his present appointment.

Cincinnati Appliance Dealers To Meet Mar. 18

CINCINNATI — First regional meeting of the Appliance Dealers Association of Greater Cincinnati will be held March 18 at the Alms hotel, it has been announced by E. E. "Bud" Crosson of Phil Stewart Electric Co., president of the group.

Dealers from throughout southwestern Ohio and Kentucky are expected to attend the meeting.

Participants in the program will include Walter C. Beckjord, president, Cincinnati Gas & Electric Co.; Wallace Johnston, president of NARDA, who will talk on "Be Your Own Boss"; John McDaniel, vice president and director of marketing at Hotpoint, who will speak on "Competitive Relations"; J. J. Anderson, manager, laundry equipment department, Westinghouse Electric Appliance Division, who will cover "Selling Laundry Equipment Profitably"; Owen Klepper, sales promotion manager, Refrigeration Division, Philco Corp., who will speak on "White Goods Merchandising"; Ray Saxon, general sales manager, consumer products division, RCA Victor, on "Television Volume Building"; and H. B. Price, Jr., NARDA vice president, on "Guard Your Future."

Mort Farr, past president of NARDA, will serve as general chairman of the meeting. The Elmer Wheeler film sponsored by Du Mont will also be shown.

Committee members assisting Crosson with the arrangements for the meeting include William Bigner of Bigner, Inc.; Lou Foltz of Foltz Electric City; William Baumer

and Fred Reddert of Baumer & Reddert; Arnold Herb and William Kramer of Herb & Kramer; Robert Pepper of Bob Pepper's, Newport, Ky.; Charles Gates of Gates, Inc., Covington, Ky.; Doc Maugle of Maugle Heating & Appliance Co., Reading, Ohio; and Charles Kohlstaal of Kohlstaal Hardware.

Wisconsin Engineers May Form Regional RSES Group

LA CROSSE, Wis.—Eighth annual Wisconsin State Refrigeration Service Engineers Society convention here April 24, 25, and 26 may be marked by the formation of a regional RSES organization, according to plans now being made.

Proposed formation of the new organization is said to have been motivated by a desire to strengthen RSES relationships, increase educational facilities, sponsor an annual trade and educational meeting, and publicize refrigeration maintenance, service, as well as repair as a trade unto itself.

A highlight of the state convention program will be a tour of the Trane Co. and the La Crosse Cooler Co. plants on Friday afternoon, April 24. The program on Saturday, April 25 includes sessions on milk cooling, industrial and commercial automatic defrosting, and commercial and industrial air conditioning. Saturday's sessions will be concluded with a tour of the G. Heileman Brewing Co. properties. A banquet and dinner dance is scheduled for Saturday night.

The program on April 26 will be featured by an "Information Please" program.

SPECIAL NEWS BULLETIN.

HAVE YOU SEEN MOST RECENT WOLVERINE AD TO YOUR CUSTOMERS?

The Wholesaler and Industry News



Like the general store of a generation ago, the wholesaler's establishment exists as a meeting place for people actually in the installation trade. Here, they compare notes and talk out problems common to all of them.

A wholesaler ranks tops as a news source. Because of his frequent contacts with manufacturers, he can often tell his customers about products that are in the planning stage. Too, many manufacturers work closely with the wholesaler in introducing new products.

Sure! Many times the system works in reverse. Wholesalers channel to the manufacturers stories as to how the product succeeded, or as to its limitations. Many manufacturers have discovered new uses for their products through this exchange of ideas.

Probably the most important way a wholesaler supplies industry news is his ability to suggest short-cuts and new wrinkles to help cut the costs of jobs. Most wholesalers have well-thumbed libraries of "how to" books and manufacturer's technical literature.

Your wholesaler probably has copies of Wolverine Tube's PLUMBER'S PAL and TUBE TRAILS. Ask him for one, today. WOLVERINE TUBE DIVISION of Calumet & Hecla, Inc., Manufacturers of tubing exclusively, 1413 Central Avenue, Detroit 9, Michigan. Plants in Detroit, Michigan and Decatur, Alabama.

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Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases. Invitations for bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q" or, if numbered, the number will be followed by the letter "Q."

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
U. S. Naval Ordnance Test Station, Inyokern, China Lake, California			
Construct new building for Job		37795	24 Mar 53
Pyrotechnic facilities and addition to building 56-B CLPP. Provide and install radiant heating, cooling. Site inspections will be made by escorted tours leaving the OinCC Design Office, Building 931, Naval Ordnance Test Station, Inyokern, China Lake, California at 1:00 p.m. ONLY 5 March through 23 March 1953 (Mondays through Fridays) inclusive.			
District Public Works Office, Headquarters, Fifth Naval District, Naval Base, Norfolk 11, Va.			
Air conditioning bldg. A 15 at the U. S. Naval Base, Norfolk, Virginia. Deposit of \$10 required for plans and specs.		36523	17 Mar 53
District Public Works Office, Sixth Naval, District-Naval Base Charleston, South Carolina			
Central Heating Plant and steam distribution system NSS-Athens, Ga.		36939-B	8 Apr 53
Aviation Supply Office, 700 Robbins Ave., Philadelphia, Pa.			
Valves Temperature regulating, for ventilation heaters, bureau of ships Dwgs 83802-860327. Alteration P-Mil Spec Mil-V-3155 Amend 2.	1,934 ea.	4-1336 B	24 Mar 53

New York Chemical Procurement District, 180 Varick St., New York 14, N. Y.

Desiccants (activated) for dynamic dehumidification type II grade H. spec. MIL-D-3716 dated 17 Mar. 1952 one pound metal cans. 15,000 lbs. (CML-30-070-53-121B) 20 Mar 53

Desiccants (activated) for dynamic dehumidification type IV spec. MIL-D-3716 dated 17 Mar. 1952 100 lb. metal drums. 70,000 lbs. (CML-30-070-53-121B) 20 Mar 53

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Business Service Center, General Services Administration, Region 4, 50 Whitehall St., S.W., Atlanta, Georgia			
Pent house type ventilating fans and aluminum awnings, Ernest Cereal Building, Nashville, Tennessee.		CR-4-426	27 Mar 53
General Services Administration, Business Service Center, 1114 Commerce St., Dallas, Texas			
Fans, exhaust, 1/2 hp. propeller type, 30 inch, for use, 110-volt, 60-cycle, alternating current.	14 ea.	FW-26030	24 Mar 53

CONTRACTS AWARDED THROUGH MARCH 6

Bureau of Ships, Washington, D. C.

Chilled water cooling coil, 185; gravity coil, 158; basic motor, 51; and controller unit coolers, 77.—\$196,858.—Mario Coil Co., St. Louis, Missouri.

Chilled water cooling coil, 347; unit coolers, 215; basic motors and controllers, 260.—\$323,492.—McIntyre Engr. Co., South San Francisco, California.

Navy Department, Public Works Department, Eleventh Naval District, San Diego 30, California

Replacing air conditioning units for Married Enlisted Men's Quarters and Enlisted Men's Barracks including remodeling of existing air conditioning housing at Naval Ordnance Test Station, Inyokern, China Lake, Calif. Eleventh Naval Dist.—Job, \$104,516.—Main Cornice Works, Inc., 2824 N. Main St., Los Angeles, California.

Dept. of Navy, Bureau of Ships, Washington, D. C.

Ice making set, tank type.—\$30,325,638.—Reco Products Div., Refrigeration Engr. Co., New York, N. Y.

Purchasing and Contracting Office, 3800th Air University Wing, Maxwell Air Force Base, Alabama

Air conditioning, complete, buildings 750-752-754 and 756, Maxwell Air Force Base, Alabama.—Job, \$50,833.—Wyatt Const. Co., 2540 Bay St., Montgomery, Alabama.

General Services Administration, Business Service Center, Region 2, 250 Hudson St., New York 13, New York

Fans, electric.—2,433 ea., \$133,683.—Robbins & Myers, Inc., Fan Div., 387 S. Front St., Memphis, Tennessee.

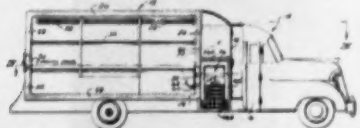
Purchasing and Contracting Office, Fort Devens, Massachusetts

Rehabilitation of cold storage plant, bldgs. P-30 and T-1846, Fort Devens, Mass.—Job, \$32,895.—Bay State York Co., 100 Brookline Ave., Boston, Mass.

PATENTS

Week of November 11
(Continued)

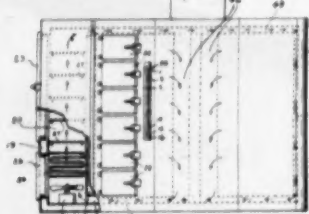
2,617,270. TRUCK FOR DELIVERY OF REFRIGERATED PACKAGED GOODS. Edward A. Ruth, Memphis, Tenn., assignor of twenty per cent to Heiskell Weatherford, Jr., Memphis, Tenn.



1. A truck body for transportation of refrigerated packages, which body includes a storage section and refrigerating means therefor and a compartment for assembly for delivery of packages from said body, said storage section and said compartment having completely enclosing insulated walls and said storage section having an access door; one wall of said compartment being an exterior wall, and including an access door, and another wall thereof separating said compartment from said storage section, said separating wall being provided with a door opening

spaced above the floor of said storage section; a closure door for said opening, means hinging said door to said wall along the lower edge of said opening to open outwardly and downwardly into said storage chamber, means which may be a part of said hinge means urging closure of said door, and means for holding and supporting said door when open in substantially horizontal position.

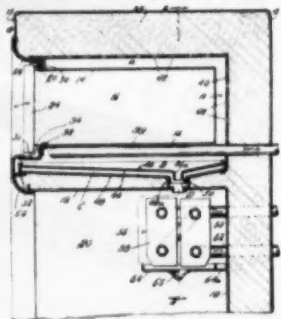
2,617,267. CIRCULAR FROZEN FOOD LOCKER. Virgil P. Long, Canyonville, and Verlin M. Wolfe, Corvallis, Ore.



1. A convection refrigeration locker, comprising a cylindrical storage room bounded by a closed insulating wall, a sharp freeze room bounded by an extension of said wall and communicating with said storage room via a plurality of circulation ducts, a plurality of interconnected solid radial walls and solid horizontal spacers defining a plurality of wedge-shaped lockers mounted for rotation within said storage room, a majority of said spacers having raised margins to define

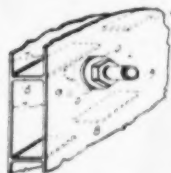
a cupped bottom for each locker corresponding thereto, and means within said sharp freeze room for refrigerating said lockers.

2,617,268. REFRIGERATOR DRIP DISPOSAL. Carl T. Ashby, Walter A. Kuenzli, and Charles A. Miller, Evansville, Ind., assignors to Servel, Inc.



A refrigerator having a compartment recessed in thermal insulation with a space between the insulation and the walls of the compartment, means for refrigerating the compartment, and a multi-layer drip tray in the space beneath the compartment with a drain from all layers of the tray projecting through the insulation.

2,617,551. REFRIGERATOR AND ITS CONSTRUCTION. Cecil D. Hopkins, Madras, Ore., assignor to William Krielaus, Oswego, Ore. Application Jan. 8, 1947, Serial No. 720,783. 1 Claim. (Cl. 220-9.)



A refrigerator cabinet having spaced apart inner and outer walls, a unitary insert disposed between said walls of the cabinet and bearing thereagainst to form a lining therefor, said insert comprising spaced apart inner and outer walls, spaced apart webs disposed between said last mentioned walls and molded integrally along both of their sides with said last mentioned walls, and a tube extending through said first mentioned outer wall and through said second mentioned outer wall and in open communication with the space between said last mentioned inner and outer walls for applying a vacuum to said space.

GENERAL ELECTRIC Tunnel-Type 1/2 Ton Units

Model Css 231B1B Low Temp. For expansion valve—2 cyl.

NEW and in original cartons PRICE—\$56.00!!

Freight Prepaid on Orders of five or more units

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POSITIONS WANTED

AIR CONDITIONING refrigeration mechanic desires installations and maintenance work in the commercial field. Prefer the Southwest. Available after March 10. Reply BOX 4257, Air Conditioning & Refrigeration News.

MAINTENANCE SPECIALIST with 10 years' experience in sales and management of maintenance contract division of large distributor desires connection with progressive company. Have total of 25 years in all branches of refrigeration and air conditioning, including service manager. Will relocate for attractive offer. BOX 4259, Air Conditioning & Refrigeration News.

SALES AND advertising management experience; also engineering and service. Twenty years in refrigeration and air conditioning. Wanted position as Sales Manager, Advertising Manager, or both. Have excellent background in both capacities and can furnish detailed history. BOX 4263, Air Conditioning & Refrigeration News.

MANUFACTURERS REPRESENTATIVE—New York metropolitan area—now selling complete compressor and commercial air conditioner line is looking for additional line of refrigeration and air conditioning basic components. Past 20 year record in industry assures aggressive, sound, businesslike representation backed by competent engineering, both Ammonia and Freons. BOX 4266, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

SERVICE MANAGER wanted to supervise installation and service of Carrier Air Conditioning equipment. Must be capable of handling men. Furnish adequate references for complete check up. This is permanent position with future and benefits. Give salary expected. PAUL SCHEURER ENGINEERING COMPANY, 1318 8th Street, Wichita Falls, Texas.

SALES REPRESENTATIVE for Chicago, and states of Illinois, Indiana, Wisconsin, Michigan. Complete line of commercial refrigerators. Salary, expenses, and incentive plan. Write, giving qualifications and references. WARREN REFRIGERATORS, Box 1436, Atlanta 1, Georgia.

DISTRICT SALES supervisor wanted. We can offer an experienced commercial refrigeration sales supervisor an attractive proposition in the Midwest territory with headquarters to be in Chicago or immediate vicinity. Primary job would be selection of new distributors and working with those already established. The ability to help distributors select and train new salesmen, actually showing them how to close a sale, would be an important asset to the man we want. If selected and you prove yourself, the way is open for earnings in excess of industry average for similar work. BOX 4246, Air Conditioning & Refrigeration News.

COUNTER SALESMAN wanted by Refrigeration Wholesaler in Akron, Ohio. Experienced or will train. Steady pleasant work; salary and bonus. Give complete resume of schooling, employment and earnings. BOX 4260, Air Conditioning & Refrigeration News.

ASSISTANT SERVICE Manager, Chicago. Air Conditioning and Heating experience. Higher position will be available when

man has proven ability. BOX 4262, Air Conditioning & Refrigeration News.

DISTRICT SALES manager: Large Nationally known manufacturer of a complete line of Commercial Refrigeration equip., Home Heating and Cooling Units, and all popular size Packaged Air Conditioners. Permanent position, salary, car, expenses, commission. Must be willing to travel well-established territory. Arkansas, Louisiana and Mississippi. Dealer contacts. Experience in this field necessary. State age, education, past connections, first letter. All of our employees know of this ad. BOX 4264, Air Conditioning & Refrigeration News.

SALESMAN, CALLING on Commercial Refrigeration and Restaurant Supply Houses, covering Northern portion of Florida, to carry additional line of nationally known refrigerators and freezers. BOX 4265, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

NEW—1/2 and 1/4-hp. open type refrigerating units, air cooled. Price: 1/2 hp.—\$84.24; 1/4 hp.—\$102.60. These units are equipped with Chieftain compressor bodies and Century capacitor type motors with built-in thermal protection. Freight allowed on quantity orders of 10 units or more, may be assorted sizes. Write for literature and specifications. ARCTIC-AIRE, 1621 Grand Ave., Kansas City, Mo.

BRAND NEW 1953 Dual-Purpose Freezer Model SF-6 Slope-Front Self-Service Frozen Food & Ice Cream Merchandiser with beautiful Formica Counter Top. Cabinet 6' 3" long; 15 cu. ft. capacity; Tecumseh sealed unit. List Price \$798.00. Special Dealer Cost \$399.00 Complete. Write or Call for other Specials: GENERAL REFRIGERATORS CORP., 2011 First Ave., NYC ENright 9-0200.

SPECIAL OFFERING 1/4-HP units with condenser and valves @ \$36. Models S64LD and S64LE. Also 1/4-HP sealed @ \$45. 1/2-HP sealed @ \$55. 1/2-HP sealed @ \$70. Other sizes up to 5-HP. Write for specifications. Limited quantity. Act now. MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., NYC, GRamercy 3-8000.

1500 NEW G.E. Century Delco Stator and Rotors for Universal Cooler Sealed Units. 115 Vts., 60 Cycle, 1/4 h.p. \$3.50; 1/2 h.p. \$4.00; 3/4 h.p. \$4.40; 1 h.p. \$5.00; Rotors \$1.00 ea. 50,000 Flare Nuts, Brass and Steel 1/2 Brass 4 cents; 3/4 Brass 5 cents; 1/2 Brass 7 cents. Short and Long Nuts, 3/4 Steel Cad Plated 3 cents; 1/2 Steel 5 cents; 1/2 Copper Bonnets 1 cent. Samples on Request. 50 New Elco Water Cooler Coils 5 and 10 Gal. \$9.50 ea. GEORGE SPEC-TOR, 951 South Dix, Detroit 17, Michigan.

FOR SALE New Trane Direct Drive #10BT—10 H.P. compressor, less motor, in original crate \$750.00. 2 Mario Low Temp Unit, Model LT-368—7560 CFM (ammonia) with automatic defrosters (used only several months) \$1500.00. Write BOX 4261, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

REFRIGERATION BUSINESS established 16 years. Sell with or without stock, equipment or real estate. Get your cost back the first year. AAA REFRIG. SALES & SERVICE, 3419 Pearl St., Jacksonville, Fla.

REFRIGERATION SUPPLY business & jobbers over 10 years in Los Angeles. Divergent interests among stockholders and management create opportunity to purchase all 25,000 outstanding shares of stock at \$5.00 each. Book value over \$6.00 not including Good Will. Cash in Bank and Current Assets over 6 to 1 ratio to Current Liabilities. Experienced Management available if desired. Terms may be arranged. Contact TED CHAMBERLIN, 4920 Victoria Ave., Los Angeles 43, Calif. Phone AMminister 3-3027.

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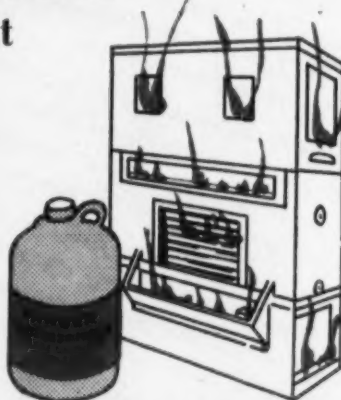
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A POTENT THOUGHT FOR MANUFACTURERS OF ROOM AIR CONDITIONERS

"Room Cooler Manufacturers still get their greatest volume from the specialists. . . . We need the specialists to give us the volume to operate our room cooler division successfully"

"Most of the units are sold through air conditioning experts who have built a reputation in the field. . . ."

"Room coolers must be sold through heavy merchandising and promotional efforts by qualified retailers. . . ."

*Quoted from recent statements
of leading manufacturers*

To sell *your* line of room air conditioners in greater volume, tell your story to the air conditioning experts.

AIR CONDITIONING & REFRIGERATION NEWS is *the* trade

publication of air conditioning experts—the men who know air conditioning *best*—Read *weekly* by the *successful* merchandisers in the field.

The APRIL 13 ISSUE will be THE 1953 AIR CONDITIONING MARKETING ISSUE

To be sure of complete distribution, bigger sales volume, advertise your room air conditioning line in the NEWS . . . keystone a consistent advertising program with dominant space in the April 13 issue.

Forms' Close April 3

And . . . Whatever you manufacture in air conditioning—full line, package air conditioning, year-round residential, central station, dehumidifiers, diffusers and grilles, cooling towers, evaporating coolers, controls, parts and accessories—you can depend on The Newspaper of the Industry to produce *lasting*

advertising results.

Put *your* air conditioning story in AIR CONDITIONING & REFRIGERATION NEWS, the industry's only newspaper. Schedule your advertising *now* in the April 13 issue.

The Newspaper of the Industry Since 1926

AIR CONDITIONING & REFRIGERATION *News*

450 WEST FORT STREET, DETROIT 26, MICH.

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134 S. LaSalle Street
Chicago 3, Illinois

New York Office
521 Fifth Avenue
New York 17, N. Y.



NEW RESIDENTIAL AIR CONDITIONER introduced by Worthing Corp. gets close inspection from distributors during a recent refrigeration distributor conference. Left to right are: P. H. Shaw, product manager for Worthington; Earl Bozman, R. H. Bozman & Bros., Baltimore; W. L. Souther, Worthington distributor representative, New York City; and W. J. Wheeler, Mainco Air Conditioning & Refrigeration Corp., New York City.

Conditioning Betters Production Scheduling On Plexiglas Cockpit Canopies for Fighters

AKRON, Ohio—Better production scheduling of laminated Plexiglas cockpit canopies for fighter aircraft has been devised by Goodyear Aircraft with a 65 to 70° F. air conditioned storage room where the relative humidity is held to 15%.

Problem was the inner layer of the three-ply plastic sheets, which readily absorbs moisture from the air. But it can't be determined whether the inner layer has absorbed excessive moisture until the laminated sheet is placed in heating ovens prior to forming. Excessive moisture will then cause bubbles in the material, which must be scrapped because perfect visibility is a necessity for the fighter pilots.

The material for each canopy also represents an investment of some \$1,000.

Before the air-conditioned storage room was set up, the plastic sheets had to go directly into production upon being received. Now Goodyear Aircraft can keep a stock on hand, and take the sheets out for forming as needed.

To maintain a low humidity condition 24 hours a day, however, presented a problem. To reach a moisture level as low as 18 grains/lb. using conventional refrigeration equipment would require cooling the air to a temperature well below freezing in order to condense out moisture. Then a large amount of air reheating would be necessary to arrive at a 65°-70° F. temperature.

To accomplish continuous operation, moreover, would necessitate duplicate sets of cooling coils, so that one set could be defrosted while the second set performed its primary function.

Goodyear Aircraft installed a 2,500 c.f.m. air capacity Kathabar dehumidifier, built by Surface Combustion Corp. This liquid chemical-type, moisture-absorbing unit accomplishes the desired air results while avoiding the usual below-freezing operational handicaps, such as shutdowns for defrosting.

A mixture of fresh air and air recirculated from the storage room enters the lithium chloride-base solution dehumidifier at conditions of 73° F., 27% r.h. This air passes through a spray of the absorbing solution so as to reduce its moisture to a predetermined value.

At the same time, both air and absorbent pass over "Freon-12" direct expansion cooling coils. This has a two-fold effect. First, these coils control the temperature of the absorbent; the colder the absorbent, the greater is its moisture-absorbing power. Secondly, the air is cooled by the coils to obtain the desired delivery temperature of 55° F.

Control of the cooling coil temperature, then, controls both the leaving air humidity and temperature without the need for overcooling and reheating. These delivered air conditions of 55° F., 13 grains/lb. (20% r. h.) are adequate to maintain the storage space at 70° F., 18 grains/lb. (15% r.h.) when the temperature and humidity pick-up in the room are considered.

A small amount of fresh air, 300 c.f.m. at maximum conditions of 95° F. and 52% r.h. (130 grains/lb.) is introduced into the system to pressurize the space. However, since it is

more economical from an operating cost viewpoint, the bulk of the air, 2,200 c.f.m., is recirculated from the room.

This Kathabar system is entirely automatic, as the absorbent is continuously reconditioned for subsequent use. After completing the dehumidifying pass, a small amount of the solution is sprayed over low-pressure steam coils in a separate chamber of the unit. Here excess moisture in the solution is driven-off and exhausted to the atmosphere by a scavenging air stream. A maximum quantity of 75 lb./hr. of 25 p.s.i.g. steam is used for this purpose. Total moisture removed from the air amounts to 88 gal. of water per day under maximum operating conditions.

Price Rises --

(Continued from Page 1, Column 5) volume of increases may wait until the demand grows greater.

Increased costs may force some increases in commercial and industrial refrigeration and air conditioning prices when ceilings are lifted, but in this field, too, the competitive situation will probably be a deterrent to any big boosts.

Westinghouse Awards Four Air Conditioning Franchises

HYDE PARK, Mass.—Four more franchises have been awarded to firms to sell Westinghouse air conditioning equipment, the company has announced.

They are Johnson-Hilliard, Inc., Kingsport, Tenn., and Gordon L. Hayes, Troy, N. Y., to sell self-contained air conditioning equipment; and J. M. Fink Co., Inc. and Musselman's, Lancaster, Pa., to sell field-assembled air conditioning equipment.

The Johnson-Hilliard firm was established in 1935 and has specialized in industrial sheet metal work as well as residential warm air heating.

Gordon L. Hayes has been in business since 1915, specializing in electrical and heating contracting as well as appliance sales. He will offer Westinghouse equipment for sales in Troy, Watervliet, Cohoes, and Waterford, N. Y.

J. M. Fink Co. specializes in air conditioning and refrigeration engineering and contracting in Manhattan.

Founded originally in 1878, Musselman's specializes in plumbing, heating, and ventilating work in the Lancaster county area of Pennsylvania.

Rogers, Clary Open New Appliance Store In Dallas

DALLAS—Rogers & Clary, Inc., a new home appliance store, has been opened here by E. L. (Ed) Rogers and Charles Clary.

The store, located at 3038 Mockingbird Lane, specializes in room air conditioners but also carries other household items. Rogers formerly operated the Home Juice Co. in Louisville, Ky., while Clary was an announcer with KRLD-TV.

Frigidaire Conditioner Is Life Saver for Chicks

ROSSVILLE, Ind.—Lives of thousands of newly hatched baby chicks are being saved every year by the Frigidaire air conditioner that Morris Gray has installed in his hatchery here.

Gray owns and successfully operates two poultry farms, plus the hatchery at Rossville where he specializes in Barred Rock broiler chicks, hatching about 30,000 a week throughout the year. In the 1951 Chicken of Tomorrow National Contest, the Gray Hatchery was the No. 1 Barred Rock entry.

Before Gray installed the air conditioner in his hatchery, he and other hatcherymen were losing many baby chicks every summer through heat suffocation. It is extremely important to keep incubating rooms from getting too hot, but during the summer months nothing seemed to solve the problem of beating the heat and the tragic, costly loss of the chicks.

Finally Gray hit on the idea of cooling his incubating rooms by installing an air conditioner. He called on the Frigidaire dealer over in the neighboring town of Frankfort and, after sizing up the amount of cooling needed, a 5-hp. unit was installed.

From that time on there have been no chicks lost due to heat suffocation. The incubating rooms are kept at the desired temperature and humidity all summer long. Also dirt and dust are kept out by the filtering action.

Gray reports that several neighboring hatcheries, in addition to many in the East, had heavy losses during the last hot weather season.

20 Appliance Dealers Sign With Omaha Bank For Charge Service

OMAHA, Neb.—One hundred and fifty local merchants, including 20 appliance dealers, have signed up with the First National Bank of Omaha for "First Charge Service."

Under this new service inaugurated by the bank, a customer can charge purchases at a wide variety of retail outlets and have all charges combined on one monthly statement.

Persons wishing to take advantage of the service are not required to be customers of the bank. There is no cost to the consumer other than the actual charge incurred at the various member stores for the month.

Charge account plates will be issued at the bank or at any of the member stores. The plate can be secured via a telephone call, if the customer desires.

Participating stores have been furnished with the "First Charge Account" emblem. This is to be displayed near the cash register as well as in the window.

Appliance dealers already signed up are: Allied Home Outfitting Co., American Appliance & Furniture Co., Archer Electric Co., Best Appliance & Television Co., Carl's Hardware, Flescher Electric Appliance & Service Co., Hopkins Furniture, Kesslers Appliance, Lebron Electric, Nelson Electric, Norbel Television, Peter Pan Furniture, Rehtmeyer's, William Ruge, J. J. Skomal & Son, Sterling Electric, Swann-Bergstadt, J. L. Tucker, and U. S. Supply Co.

Production of Freezers Begins at Johnson Mfg.

MIDDLETOWN, Conn. — Johnson Mfg. Corp. here recently announced that it has acquired some 65,000 sq. ft. of space, installed modern manufacturing equipment, and begun producing food freezers for frozen food plan operators and distributors.

Officers of the company include Joseph Silver, president; Mel Silver, secretary; and Nelson S. Bloomenstein, general manager.

Price Reduced 3% on Colfoam Insulation

CLEVELAND—Colfoam Insulation has been reduced in price 3%, according to an announcement by Bernard R. Krashin, vice president of The Colton Chemical Co.

The company states that this price reduction applies to shredded Colfoam—an extremely light-weight and very efficient insulation—and was made possible by increased production and more effective methods.

Colfoam was acquired by The Colton Chemical Co. in 1952 through the purchase of United States Rubber Co.'s Flotofoam Insulation Division. A urea formaldehyde plastic foam, Colfoam, in addition to the shredded grade, is available in block form.

Bigger, Better, and Cooler

LITTLE ROCK, Ark. — Stacy's Fine Foods, Seventh and Battery Sts., has air conditioned, enlarged, and remodeled its store, according to Harry Stacy, owner.

NEW! for tight spots

ALCO "T" SERIES THERMO VALVES with "STRAIGHT-THROUGH" CONNECTIONS

Easy to install in tight spots. You work from above... no twisting and turning. "Straight-through" connections fit over any type of distributor. They give you the same easy, on-the-line servicing features as Alco "T" Valve with angle-type connections.

When ordering, please specify whether "angle-type" or "straight-through" connections are desired. For "Freon-12", "Freon-22", Methyl Chloride. Write for further information.

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